Transitions of care in mental health

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ABSTRACT

Introduction: The occurrence of mental disorders and chronic diseases is associated with low treatment compliance and an increased mortality. The main objective of this study was to analyze medication prescriptions at hospital discharge in order to verify the patients' access to the prescribed treatment.

Methods: This is a descriptive and retrospective study performed between September 2013 and September 2018 with patients admitted in the psychiatric ward of a university hospital in the state of Rio Grande do Sul. The studied patients consisted of 274 adults over 18 years of age admitted to this hospital with at least one psychiatric comorbidity included in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) who lived in the city of Porto Alegre used specially controlled drugs, and had been hospitalized for at least 7 days.

Results: Out of the 274 patients, 68.5% were readmitted once, 17.5% were readmitted twice, 9.5% were readmitted 3times, and 4.5% went through this process 4 times or more. A significant association (p = 0.014) was observed between the number of drugs not included in the Municipal Essential Medicines List upon first readmission and the number of readmissions. Among patients who were readmitted 3 times or more, 79% were prescribed drugs that were not on this list.

Conclusions: The understanding of how therapeutic itineraries are established when searching for drugs contributes to setting effective lines of care where professionals may position themselves more proactively to reduce mental health complications.

Keywords: Mental health; psychiatric; drugs; primary health care; pharmaceutical care

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INTRODUCTION

Mental disorders account for approximately 12% of the global burden of disease[1,2]. The World Health Organization (WHO) defines mental health as "a state of well-being in which every individual realizes his or her potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community"[3]. With population aging and the management of comorbidities, psychiatric and physical disorders have become more relevant. These disorders are associated with an increased hospitalization risk, worse health outcomes, and increased costs[4].

Among adults diagnosed with mental disorders, 68% also present chronic diseases. According to Alegria et al.[5] (cited by Abernathy et al.[6]), data indicate that the occurrence of mental disorders and chronic diseases is associated with low treatment compliance and increased mortality[5].

The management of prevalent mental disorders is a major public health issue involving primary care[7,8]. Building a mental health system that supports individuals with psychiatric disorders in a comprehensive manner is a challenge to mental health services[9].

Improving access to primary care is important, since most patients with mental health disorders are assessed by primary care physicians after being discharged[6]. Patients may not receive proper treatment due to medication discontinuation, increased costs, lack of trust, and the stigma associated with their illnesses. Because of hindrances to treatment within primary care,

only 41% of adults with mental health disorders received treatment in 2012[6]. The communication between staff and patients is infrequent, impairing the designed therapeutic plans[10].

The rate of psychiatric readmission is a widely used indicator in mental healthcare. Reducing the number of readmissions should be a priority for the effectiveness of health services and the improvement of outcomes for service users[11,12]. Psychiatric readmission rates are negative indicators of the operation of the healthcare network[13-15]. Readmission is not only an indicator of hospital care quality[15,16], but also of subsequent care in the whole mental healthcare system[15,17]. Identifying health conditions associated with potential hospital readmissions may provide health care professionals and services with paths to prevent this problem[18].

Inappropriate care transitions may result in poor communication between patients and health care professionals, incongruous changes in drug prescriptions, and in the patient's meager understanding of the situation as well as a weak understanding of the patient's condition[19].

Transition of care refers to the various points where a patient moves to, or returns from, a particular physical location or makes contact with a health care professional with the aim of receiving health care. This includes transitions between the patient's home, the hospital, residential care settings, and consultations with different health care providers in outpatient facilities. Care transition strategies have been studied as a potential path for reducing readmissions[19]. In Brazil, public outpatient services have been increasingly valued in the last four decades[20], as the previous model was hospital-centered[21]. To constitute an organized and integrated psychosocial care network with a focus on transitions of care and aiming at an effective whole-person care, we have reviewed the drug prescriptions issued to mental health patients upon their discharge from a university hospital.

METHODS

This is a descriptive study, with a retrospective analysis, performed between September 2013 and September 2018 with patients admitted in the psychiatric ward of a university hospital. The selection criteria used in the study were: being an inpatient in the hospital's psychiatric unit and undergoing medication reconciliation.

The AGHUse software (Management Application for University Hospitals) contains medical records obtained by the nursing team informing which and how many drugs under special control are being used by the patient for subsequent transcription to the drug reconciliation form and comparison with those prescribed upon hospital discharge. Using SPSS, a database was created with non-identifiable socio-demographic variables: gender, age, education, and occupation.

Data were analyzed using SPSS version 21.0. Variables were described as absolute and relative frequencies. The normality of quantitative variables was verified through the Kolmogorov-Smirnov test to define parametric and non-parametric tests. The Chi-squared test was used to assess differences among groups; whenever its requirements were not met, the Fisher's Exact test was used in substitution. To verify the association between categorical and quantitative variables, the Chi-squared test and Spearman's correlation were respectively used. The significance level used in this study was 0.05.

The study was submitted to and approved by the Research Ethics Committee of the university hospital according to Resolution no. 466/2012 of the National Health Council, with the Approval Statement under No. 2.921.289.

RESULTS AND DISCUSSION

The study included 274 patients aged 18 years or older who were admitted to the psychiatric unit of the university hospital with at least one psychiatric comorbidity mentioned in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5); all patients lived in Porto Alegre, used continuous medications, and were hospitalized for at least 7 days. Patients who had not previously used any drugs or whose clinical conditions did not allow adequate information collection for their medical histories were excluded. Female patients accounted for 54.4% of the participants, and those cared for by the public health system consisted in 79.9% of the sample; 54.4% were aged between 36 and 65 years (considered of productive age) and 43.4% had low education levels. One to two psychiatric readmissions in the previous five years were observed in 85.8% of the patients (Table 1).

When analyzing medication prescriptions, we observed that haloperidol was prescribed to 50 (18.2%) patients during hospitalization, of which 32 (11.7%) had the prescription maintained at hospital discharge. Chlorpromazine was prescribed during hospitalization for 33 (12.0%) patients and, at discharge, maintained for 7 (2.5%) patients. Biperiden was prescribed to 22 (8.0%) patients at admission and 1 at discharge. These medications were selected from the list of medications provided by the municipality.

Table 1: Demographic data of the sample.

Characteristic	n (%)
Gender	
Female	149 (54.4)
Male	125 (45.6)
Health Care System	
Public	219 (79.9)
Private	55 (20.1)
Age	
18–35	75 (27.4)
36–65	149 (54.4)
> 65	50 (18.2)
Education	
Unfinished primary school	88 (32.1)
Primary school	31 (11.3)
Unfinished secondary school	18 (6.6)
Secondary school	57 (20.8)
Unfinished university major	25 (9.1)
University major	42 (15.3)
Not known/none	13 (4.8)
Number of readmissions	
1	187 (68.3)
2	48 (17.5)
3	27 (9.8)
4 or more	12 (4.4)
Readmissions (more than once)	
Yes	84 (30.6)
No	190 (69.4)

Clozapine was prescribed to 36 (13.1%) patients during hospitalization and to 58 (21.2%) at hospital discharge. Quetiapine was prescribed to 38 (13.9%) hospitalized patients and to 53 (19.3%) patients at hospital discharge. Olanzapine was prescribed during hospitalization to 37 (13.5%) patients and at hospital discharge to 60 (21.9%) patients. Risperidone was prescribed at hospital admission to 60 (21.9%) and at hospital discharge to 54 (19.7%) patients. These drugs are not on the municipality's drug list, hence are not selected for being supplied by the municipality.

Among the 274 studied patients, 187 (68.5%) were readmitted once within 5 years, 48 (17.5%) were readmitted twice, 26 (9.5%) were readmitted 3 times, and 12 (4.5%), 4 times or more. A significant association (p = 0.014) was observed between drugs not included in the municipality's medication list but prescribed at first admission and the number of readmissions; moreover, 217 (79.2%) patients who were readmitted 3 or more times received prescriptions of drugs that were not included in the list of medications provided by the municipality.

In medical settings, the term "clinical handover" is used to describe the transfer of care from one health care professional to another. However, the concept of clinical handover is limited in its capacity to capture the broad range of issues involved in the transfer of a patient and his or her care responsibilities from one part of the health care system to another; it is focused on the role of the health care professional and does not acknowledge the patient's role and needs[22].

Transitional mental health care is based on a comprehensive care plan and the availability of well-trained health professionals with current information on the patient's goals, preferences, and clinical status, as well as how he or she purchases medications. It includes logistical arrangements, patient and family education, and coordination among health care professionals. Transition care, which covers the sending and receiving aspects of the transfer, is essential for people with complex fulfillment needs, and the lack of access to medications compromises the entire treatment[14].

We observed that 203 (74.1%) patients received prescriptions for clozapine, quetiapine, and olanzapine, medications that are not on the Municipal Essential Medicines List. Studies corroborate our findings and show that drugs used as a second line in the treatment of psychiatric disorders are not available on the municipal list and yet are still prescribed by doctors[23].

There is no easy solution to providing safer care transitions in mental health; various strategies are needed. Both large- and small-scale interventions need to be undertaken in the organization and delivery of health services. Transitions of care are an integral part of a patient's journey through the health care system. Effectively managing transitions from primary care to hospital care and vice versa is essential. Transitions between hospital and primary care settings are recognized as high-risk scenarios for patient safety in mental health[19].

The impacts of problems identified at transitions of care in mental health include: increases in morbidity (temporary or permanent injury or disability) and in the number of adverse events, delays in receiving appropriate treatment and community support, additional emergency department visits, preventable readmissions, emotional and physical pain and suffering by service users, caregivers, and families, as well as patient and provider dissatisfaction with care coordination[19].

When treating schizophrenia, haloperidol or chlorpromazine are the drugs of choice. These are included in the medications list, which is not the case with clozapine, considered the drug of choice for treating patients who do not respond to other antipsychotics. In our sample, between first admission and discharge, there was a decrease of 36.0% in haloperidol prescriptions and of 78.8% in chlorpromazine prescriptions. For patients who are not responsive to the first line of treatment, the use of clozapine, which is not on the list, is recommended. Transitions from one care setting to the next are often accompanied by changes in health status. Patients transferred between health care sectors may have a new diagnosis, new treatment plan, or a change in functional status that affects their ability to manage their own conditions outside of the health care setting.

People with mental health disorders are most likely to undergo multiple transitions of care and are at the highest risk for adverse events and safety incidents[19].

The patient's journey through the health care system can involve interfaces between primary, community, and hospital care. The only constants in these transitions are patients and their families and caregivers. Therefore, the patient's role and responsibilities must be considered key to any strategies that support safe and effective transitions of care.

Factors that go beyond the clinical determinants that may influence transitions of care include the patient's cognitive status, activity level, and functional status, the availability of support from caregivers and family, and whether the patient is able to obtain the necessary medications[24].

Transition of care is a complex set of processes. The risk of errors needs to be minimized and check points need to be established to mitigate the impact of failures that may still happen. Strategies to minimize risk include a standardized medication list accessible to healthcare professionals and patients, an agreement on the terminology used by health care providers and care settings, and the standardization of information transfer[19].

Discharge planning is typically described as the development of an individualized plan for a patient to ensure that he or she leaves the hospital at an appropriate time with proper referral arrangements to ensure a smooth transition from one level of care to another. An intervention that has been found to be effective and can be implemented across health care systems, regardless of their structure, size, and funding, is medication reconciliation. The target group includes all patients, but particularly those who have prescription drugs for mental health disorders.

Medication errors are a common safety issue. More than 40% of all medication errors are believed to result from inadequate reconciliation in handoffs during hospital admission, transfer, and discharge. Among these errors, around 20% are believed to result in harm[25]. Many of these errors can be averted by medication reconciliation, which is defined as the process of comparing a patient's medication orders to all the medications he or she has been taking. Medication reconciliation also verifies discontinued and previous medications, as well as medications added at the hospital. This should be done at every transition of care where new medications are ordered or existing orders are rewritten[25].

The process of medication reconciliation involves identifying current medications, listing those to be prescribed, comparing medication lists, making clinical decisions based on this comparison, and explaining the new list to the patient and health care professionals. The exact strategies may differ depending on the care context. Nevertheless, performing medication reconciliation at every transition point can reduce adverse drug events and prevent hospital admissions[19].

In addition to medication reconciliation at points of transition, a patient's medication list should be maintained in the primary care records. Although there are logistic challenges in high-through put services, especially when patients seek treatment from multiple health care providers, this is an important area of focus to support safer care. The medicines list did not meet all the prescriptive needs of patients after hospital discharge. The prescription of drugs not included in the list to patients admitted for the first time was found to be associated with a larger number of readmissions ($p = 0.014$); this association was not found in the other admissions and discharges.

Data from Europe, the USA, and Canada indicate that up to 13% of users of mental healthcare services are readmitted to hospitals soon after being discharged following an acute psychiatric admission[26]; in our study, this number was higher (30.6%). An Australian study has described hospital readmission as a standard mechanism within the mental healthcare system[27]. The term "revolving door," related to the constant patient admissions and discharges, is used to depict the repeated hospitalizations undergone by patients of psychiatric institutions[28].

Some studies show evidence of progress originated in the Brazilian Psychiatric Reform; this includes deinstitutionalization, which dismisses the pattern of asylums and fosters inclusion by integrating individuals in the various venues of society[26]. This could be justified by patients undergoing regular monitoring and being aligned with the Brazilian Mental Health Public Policy. Deinstitutionalization was the main alternative to the mental hospital practice, seeking care in the patient's freedom. In this study, only 30.6% of the patients were readmitted, and a significant difference was observed between the number of patients admitted once and those who were admitted twice or more ($p < 0.001$). These data differ from the high number of psychiatric readmissions found in the literature[9,29].

These readmissions are characterized by distinct frequency criteria: the number of admissions and the intervals in between. Bezerra and Dimenstein[29] describe a significant number of readmissions to psychiatric hospitals caused by irregular medication use. These authors justify the repeated admissions with the lack of access to proper mental health care or with a non-adherence to medication treatment by the discontinuation of prescribed drugs[30]. In studies performed in Spain and Portugal, rates of 10% of patient readmissions were found; another study, in the USA[12], showed that 79.8% of the patients were readmitted to the hospital during the 2 years the research was performed[30]. According to Vigod et al.[14,31], new admissions soon after hospital discharge may reflect poor transitions of care. The provision of a wide offer of care to chronic mental disorder patients faces many challenges. The lack of access to appropriate drug prescriptions may be the

factor that causes hospital readmissions. Therefore, structuring the drug choice so that it comprehends mental health may prevent difficulties when transitioning care for these individuals. The mental healthcare team should be aware of the sequence of the prescribed treatment to prevent gaps upon hospital discharge by considering the patient in longitudinal care. Mental health care services need to be integrated to offer a broader and more complete care to their users[31].

The roles of basic health care and Family Health Strategy (FHS) in mental health are addressed in several legislative, regulatory, and technical documents of the Brazilian public health system. Basic care is referred to as fundamental in the Mental Health Care Network, although there is no specific operational guidance for primary health care in this document[32].

People affected by mental disorders need health systems that supply their care needs according to the best possible scientific evidence. The academic production gathered by the Global Mental Health shows that these psychosocial and pharmacological resources are cost-effective and must be globally accessible. Achieving this objective is only possible, in the short term and in a sustainable manner, by building a strong primary care that is integrated to an organized mental health network and specialized resources for forming the basis of mental health care[33].

Professionals from the interdisciplinary mental health team represent psychosocial rehabilitation as a complex process of developing the autonomy of patients with mental health disorders, allowing their social integration and abandoning a unilateral view of the patient's symptoms. For psychosocial rehabilitation to occur, professionals consider that therapeutic planning should be elaborated together with a competent team, diagnosing the patients 'needs, providing them with further information and better treatment, and considering each patient's potentialities instead of focusing on the limitations entailed by the mental illnesses[34].

Limitations of the present study include the fact that patient evaluation was performed in a single center and the non-uniform prescription of medications, which may have been responsible for measurement bias.

CONCLUSIONS

This article aims to problematize mental health care in Brazil in light of the concept of transitions of care. Important factors include the potential location of health services, patient registries, shared decision support systems across services, the development of clinical pathways for specific conditions, and formalized relationships between health care professionals or health services in different sectors. Understanding how transitions of care happen in mental health services may contribute to diminishing what the theoretical framework refers to as the revolving door, characterized by multiple hospital admissions. Drugs seem to be closely correlated to hospital readmissions; their absence interrupts transitions of care when the patient arrives in primary health care, resulting in the need for specialized care medications. Understanding how transitions of care are established when the patient is looking for medications searching for drugs contributes to setting effective lines of care in which professionals may position themselves more proactively to reduce mental health complications.

Conflicts of interest

The authors declare no conflicts of interest.

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