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An Attempt to Stem the Tide: Exploring the Effect of a 90-Day Transitional Care Intervention on Readmissions to an Acute Male Psychiatric Unit in South Africa

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ABSTRACT

Introduction: Pressure on inpatient beds often results in premature discharges, which may precipitate early readmission. This has prompted an increased interest in transitional care interventions to bridge the gap between in- and outpatient care to reduce such readmissions. Our study aimed to assess the effect of a Transitional Care Service (TCS) on readmission rates in a high pressure inpatient service which utilizes a premature discharge policy to address bed pressures.

Methods: Sixty male patients identified for crisis discharge were offered a TCS for the first ninety days after discharge. Patients received a structured intervention consisting of four phone calls and one home visit, focusing on maintaining adherence, appointment reminders and psychoeducation. The TCS patients were retrospectively compared to a matched control group in terms of readmission after 90 days. Data was collected on adherence to medication, attendance of appointments and incidence of substance use.

Results: There was no significant difference in readmission rates. Prevalence of substance use was very high (90%), especially methamphetamine use (48%). Adherence dropped from 45% (n = 27) at one week post-discharge to 25% (n = 15) at 90 days.

Conclusion: Structured telephone-based transitional interventions have no effect on readmission rates in this setting. Prematurely discharged patients require more comprehensive support with focus on comorbid substance use.

Introduction

With deinstitutionalization now a well-established concept in 21st century mental health services, many countries have seen significant changes in acute psychiatric admission patterns. As a result of the reduction in number of acute inpatient beds globally and the cost associated with inpatient stay, the focus of acute psychiatric admissions has shifted from recovery to stabilization of acute symptoms (Vigod et al., 2013). Average length of hospital stay (LOS) for most patients has thus become significantly shorter which contributes to early readmission rates and exacerbation of revolving door patterns (Botha et al., 2010; Segal, Akutsu, & Watson, 2002; Vigod et al., 2013). Unfortunately, bed pressures and cost often dictate admission policies, resulting in premature discharge of patients who have not fully recovered.

Consequently, there has been an increased interest in interventions that are focused on the pre-and post-discharge periods in an attempt to reduce early readmissions (Hengartner et al., 2016; Nurjannah, Mills, Usher, & Park, 2014; Puschner et al., 2011; Smith & Newton, 2007; Steffen, Koster, Becker, & Puschner, 2009; Vigod et al., 2013). Early readmission is defined as readmission to hospital within the first 90 days after discharge. Though relapse rates vary between settings, they can be as high as 13% during this period, with one-year relapse rates ranging from 30%–43% in reported studies (Loch, 2012). While there is a lot of data on short versus longer stay in hospital, most of this data is based on planned short admissions within well-functioning mental health services which offer comprehensive post-discharge care (Babalola, Gormez, Alwan, Johnstone, & Sampson, 2014). Premature discharges result in inadequate discharge planning and patients are often discharged before they can engage in psychosocial and substance use interventions. A number of authors have reported on the association between shorter length of stay and early readmission, increased suicide-rates and substance use (Boaz et al., 2013; Capdevielle, Ritchie, Villebrun, & Boulenger, 2009; Niehaus et al., 2008). Emergency discharges and the implications thereof are a contentious issue, as

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clinicians are expected to bear medico-legal consequences of counter-therapeutic policies.

The transitional care model describes interventions aimed at the period of transition from in- to outpatient care. This includes pre-discharge interventions such as needs assessments, post-discharge interventions that include assertive community treatment and telephonic reminders, as well as so-called bridging interventions, which include aspects of both pre- and post-discharge interventions. These services often have multiple components, including psychoeducation, telephone-based follow-up and appointment reminders. Many of these services focus on improving communication between inpatient and outpatient care providers and ensuring a smooth transition of care. In their 2013 systematic review, the authors concluded that these interventions may pose a cost-effective solution to effective post-discharge care (Vigod et al., 2013). In another systematic review of discharge planning, Steffen et al. concluded that discharge planning may be effective in reducing readmission and improving adherence (Steffen et al., 2009). However, not all studies utilizing transitional care models have been able to replicate these positive outcomes (Hengartner et al., 2016; Puschner et al., 2011).

A number of factors have been identified as being able to influence the efficacy of discharge interventions. Nurjannah et al. concluded that effective communication with patients and carers, as well as communication with primary care providers, are crucial components in effective discharge planning (Nurjannah et al., 2014). Patients who have a poor understanding of discharge planning and case management were found to be seven times more likely to be readmitted (Sledge, Dunn, & Schmutte, 2008). Caton et al. found that inadequate discharge planning and poor socio-economic circumstances influenced treatment compliance and early readmission rates (Caton, Koh, Fleiss, Barrow, & Goldstein, 1985).

In a 2006 systematic review of telephone-based interventions for mental disorders, the authors concluded that telephone-based interventions may be effective in reducing the symptoms of mental illness (Beebe, 2001). Only one of the fourteen studies included in the review assessed a telephone-based interventions in patients with schizophrenia and the results were found to be positive but not significant (Leach & Christensen, 2006). The authors commented that telephone-based interventions are particularly attractive as means of service delivery, since they are cost-effective, convenient and accessible. In a recent study, our research group explored the efficacy of a telephone-based intervention that merely facilitated standard care over a 12-month period. Patients in the intervention group where assigned care facilitators (CFs) who provided telephonic support and reminders over the 12-month period. The authors concluded that there were no differences in readmission rates between the two groups but the intervention group appeared to be less ill at 12-month follow-up (Botha, Koen, Mazinu, Jordaan, & Niehaus, 2016).

In the Western Cape Province, South Africa, an early “crisis” discharge policy has been adopted to address the severe bed pressures in acute in-patient units by reducing length of stay. A crisis discharge is defined as follows: where an acutely mentally ill person in the community requires urgent admission to the hospital and no beds are available, clinical ward staff will identify the most stable and least-at-risk in-patient for early discharge (Niehaus et al., 2008). Ideally, the discharge conditions should be conveyed to the carers and appropriate follow-up arrangements are made. A 2006 study conducted at Stikland Hospital showed that the “crisis discharges” were associated with a significantly increased risk of readmission and shorter time to readmission. In addition, this has led to an increase in the number of so-called “revolving door” or “high frequency users”, in other words, patients with severe mental illness who are frequently admitted to hospital and remain well for only short periods of time (Niehaus et al., 2008). This strategy has unfortunately become standard practice in the male acute wards, where there are long waiting list for patients who are being contained in facilities that are not equipped to manage behaviourally disturbed patients. These premature discharges often leave inpatient staff with little time to prepare patients and families optimally before discharging them to community services. In addition, Community Mental Health Services (CMHS) are already burdened with high case-loads and limited resources, making it difficult to contain these recently discharged patients and their families.

This prompted the Stikland Ambulatory Services to pilot an After-Discharge-Support-Service (ADSS), which would aim to support patients in the first 90 days after discharge to bridge the gap between in- and out-patient follow-up. An initial home-visit was incorporated in the intervention to optimize early engagement with patients and carers. The service was piloted in a well-defined area, specifically targeting areas which do not have secondary referral hospitals and therefor refer directly to Stikland Hospital.

Aim

The purpose of the study was to assess the effect of a 90-day post-discharge service on readmission rates in comparison to a care-as-usual group.

Methodology

Setting

This study was conducted at Stikland Hospital, one of the three large state psychiatric hospitals in Cape Town, South Africa. The hospital, along with two others, provides inpatient services to the whole of the Western Cape Province, servicing a population of approximately 5 million people. Stikland Hospital has 82 acute male beds which are run at a 110% capacity with 16–20 admissions weekly and serves a catchment area of over 1.5 million people. Most, if not all, discharges are selected according to a crisis discharge protocol.

Participants

All male patients between 18 and 59 years old who had been identified for crisis discharge were considered for inclusion in a new pilot service. Recruitment took place two days per week, to stagger inclusions in order to meet the demands of existing case-loads. All patients identified for discharge on these specified days and who met the inclusion criteria, were included in the ADSS, hereafter referred to as the Intervention Group (IG). Recruitment concluded when sixty patients (n = 60) had been included in the service and lasted eighteen months. This caseload (n = 60) was based on the estimated number that could be managed in addition to existing case-loads in the Assertive Community Treatment (ACT) team.

Inclusion criteria

- Patient and family willing to participate in the service
- Contact number/s available
- Patient not already receiving another intervention (ACT/step-down facility)
- Patient residing in pre-defined geographic areas within the Stikland Hospital catchment area.
- Patients identified for crisis discharge

Patients identified for crisis discharge had to meet the following criteria (Niehaus et al., 2008):

- Most clinically stable patient in the ward
- Not pose an immediate threat to self or others
- Less ill than the patient needing urgent admission
- Most practical follow-up arrangements have been put in place prior to discharge