Journal of Substance Abuse Treatment 70 (2016) 58–63

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Monitoring a Prison Opioid Treatment Program Over a Period of Change to Clinical Governance Arrangements, 2007–2013

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ARTICLE INFO

Article history:
Received 12 April 2016
Received in revised form 17 July 2016
Accepted 5 August 2016
Available online xxxx

Keywords:
Opioid substitution therapy
Prisoners
Methadone
Prison
Retention
Clinical governance

ABSTRACT

Background and aims: Opioid substitution therapy (OST) is an effective treatment for opioid dependence that is provided in many correctional settings, including New South Wales (NSW), Australia. In 2011, changes to the clinical governance of the NSW prison OST program were implemented, including a more comprehensive assessment, additional specialist nurses, and centralization of program management and planning. This study aimed to document the NSW prison OST program, and assess the impact of the enhanced clinical governance arrangements on retention in treatment until release, the provision of an OST prescription to patients at release, and presentation to a community OST clinic within 48 hours of release from custody.
Method: Data from the NSW prison OST program were obtained for the calendar years 2007–2013. Outcomes were analyzed quarterly using log binomial segmented regression.
Results: 8577 people were treated with OST in NSW correctional centers, 2007–2013. Over the entire study period, patients were retained in OST until release in 82% of treatment episodes; a prescription for OST was able to be arranged prior to release in 90% of releases; and patients presented to a community clinic within 48 hours of release in 94% of releases with prescriptions. Following the introduction of the changes to clinical governance, there was a significant increasing trend in retention in OST until release, and in provision of an OST prescription at release. There was an initial increase, followed by a decreasing trend, in presentation to a community clinic within 48 hours of release.
Discussion: This large prison-based OST program has high rates of retention in treatment and continuity of care as patients transition from custody to the community. Strengthened clinical governance arrangements were associated with increased retention in treatment until release and increased provision of an OST prescription at release, but did not improve clinic attendance following release from custody.

1. Introduction

Opioid substitution therapy (OST) is an effective treatment for opioid dependence (WHO, 2009). It significantly reduces opioid use and injecting drug use (Mattick, Breen, Kimber, & Davoli, 2009, 2014), and is highly protective against overdose mortality (Degenhardt et al., 2011). OST is widely available in correctional settings throughout Western Europe, Canada and most Australian jurisdictions (HRI, 2014; Rodas, Bode, & Dolan, 2012). As in the community, OST in correctional settings reduces drug use, injecting risk behaviors, and mortality (Dolan et al., 2003; Larney, 2010; Larney et al., 2014). Continuation of OST from prison into the community significantly reduces post-release mortality (Degenhardt et al., 2014) and re-incarceration (Larney, Toson, Burns, & Dolan, 2012); retention in treatment as people transition from prison to the community is critical to realizing these benefits.

OST has been available in correctional settings in New South Wales (NSW), Australia, since 1986 (Gorta, 1992), making it one of the world's longest-running prison OST programs. Medical services in NSW prisons, including the Opioid Treatment Program (hereafter the OST Program), are provided by Justice Health and Forensic Mental Health Network (JH&FMHN), a statutory body under the NSW Ministry of Health.

In 2011, rapid increases in OST patient numbers led to concerns regarding the ongoing capacity of the organization to continue to deliver safe, high quality care to the program patients, prompting a review of clinical governance of the OST Program (JH&FMHN, 2012). This led to a revised clinical pathway for commencing OST in custody, including the introduction of more comprehensive assessment processes for patients seeking to commence OST in custody (including completion of a clinical file review and assessment of access to OST post-release), newly created Drug and Alcohol Clinical Nurse Specialist positions at

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http://dx.doi.org/10.1016/j.jsat.2016.08.001
0740-5472/

the majority of JH&FMHN health centers delivering OST, and centralization of OST Program management and planning (JH&FMHN, 2012; KPMG, 2013). The aim of these changes to clinical governance was to improve patient safety and the quality of clinical care within the OST Program. These changes were implemented across JH&FMHN sites in 2011.

In light of the introduction of these new clinical governance processes, this study aimed to:

1. Document JH&FMHN Opioid Treatment Program activity, 2007–2013;
2. Identify possible impacts of the revised clinical pathway on patient outcomes.

2. Methods

2.1. Setting

NSW has the largest prisoner population in Australia, with a daily average population of 11,011 adults in full-time custody in 34 correctional centers in 2014/15 (Corrective Services NSW, 2015), including individuals on remand (pre-sentence) and sentenced persons. It has been estimated that, in 2009 (the most recent year for which data are available), 17% of NSW prisoners used heroin daily or almost daily in the 12 months prior to incarceration, and at that time, 43% of heroin users were in OST (Indig et al., 2010; Larney & Indig, 2012).

The prison OST Program continues treatment of patients who enter custody already prescribed OST, and assesses new patients seeking to commence OST in custody. JH&FMHN is responsible for the provision of medical and nursing care to OST patients, including assessment of eligibility for entry to OST; prescribing; supervision of daily dosing; and clinical review when indicated. Eligibility for induction onto OST in custody is clinically based, with a documented history of opioid dependence being the main criterion. Engagement in the OST Program is voluntary and unrelated to criminal justice proceedings. OST patients may choose to seek counseling or psychological services, but these are outside the remit of JH&FMHN and are provided by Corrective Services NSW.

OST patients attend the correctional center clinic daily for dosing. To maximize retention in treatment as patients are released to the community, and therefore minimize post-release risks, patients are provided with comprehensive release planning services. Engagement with post-release planning is voluntary. For patients with a planned release date, the discharge planning unit identifies a suitable OST provider for the patient to attend post-release, and ensures that the provider is in receipt of a valid OST prescription covering the first four weeks post-release for that patient. The preferred community OST provider is typically located in a public clinic, with dosing on-site and no direct costs to patients. Some patients may attend private clinics, which may charge nominal dosing fees that are the responsibility of the patient. Clinics provide supervised dosing and may offer voluntary counseling or other welfare services. Given the frequently severe clinical profile of OST patients released from custody, dosing within a clinic setting is preferred to pharmacy dosing.

A small minority of OST patients are released unexpectedly by the criminal justice system (e.g. remand detainees released from court) and hence are unable to be provided with a pre-release planning service to support ongoing OST in the community. In these situations, the discharge planning unit is usually contacted by a community OST provider to arrange OST prescription for the releasee who has presented to their service seeking ongoing treatment so that there is no interruption to dosing. In these instances a four-week prescription is provided during which interval the clinic takes over the responsibility for the continuity of the prescription.

2.2. Data source

Data were extracted from the JH&FMHN Drug and Alcohol Database, which records all episodes of care provided under the Opioid Treatment Program, including the date on which the episode opened (i.e. the date on which treatment in custody commenced; treatment may be a continuation of community OST or initiated in custody) and closed (i.e. the date on which treatment in custody ceased; treatment episodes may be closed while the patient is still in custody, or may close due to the patient being released). The dataset included all episodes of care occurring 2007–2013, including episodes that commenced prior to 2007 but continued into that year, and all episodes commenced in the calendar years 2007–2013. Variables included demographics, characteristics of treatment episodes, and presentation to community OST providers within 48 hours of release from custody. The period of 48 hours was selected by the program as an outcome in order to assess continuity of care as patients transitioned from prison to the community.

2.3. Data analysis

We calculated the average daily number of patients by year, 2007–2013, and compared this to the average daily prisoner population. We also examined the following indicators of successful retention in treatment in custody and transition to community treatment:

1. The proportion of OST episodes where the patient was retained in OST until release;
2. The proportion of OST patient releases in which an OST prescription was arranged prior to release;
3. The proportion of releases with an OST prescription that presented to a community OST clinic within 48 hours of release.

We used log binomial segmented regression to assess if the changes to clinical governance in 2011 had an impact on these indicators. Segmented regression allows for assessment of the impact of an intervention on an outcome through analysis of time series data. Segmented regression controls for pre-existing trends in the outcome and examines two possible changes following the introduction of an intervention: firstly, changes in level, which signify an abrupt intervention effect on the outcome; secondly, changes in trend, which represents a gradual change in the outcome following the intervention (Wagner, Soumerai, Zhang, & Ross-Degnan, 2002).

We analyzed the selected outcomes on a quarterly basis and divided the study period into two intervals: 2007–2010 (pre-changes to clinical governance) and 2011–2013 (post-changes). As the changes were implemented throughout 2011, including this year in the post-change interval is a conservative approach. Regression models included the following terms: treatment closing quarter, a continuous variable measuring the underlying trend in the outcome; interval, a binary variable (0 = pre-change, 1 = post-change) measuring changes in outcome level from 2010 to 2011; and post-change trend, coded as 0 prior to 2011, and incrementing by 1 for each year from 2011 onwards, measuring the trend over time in the outcome following the changes to clinical governance. Patient sex and age were also included in the models to control for variation in these over time. Repeated measures were adjusted for by clustering by individual.

Data analysis was conducted using SAS 9.4 (SAS Institute, Cary, North Carolina, USA). Ethical approval for this study was provided by the JH&FMHN Research Ethics Committee.

3. Results

Between 2007 and 2013, 8577 people received opioid substitution therapy via the JH&FMHN OST Program. Only 125 patients (1.5%) had no previous experience of OST. Patients were largely male (n = 6948, 81%), and 15% (n = 1245) identified as indigenous. The median age at first recorded treatment entry between 2007 and 2013 was 32 years (inter-quartile range (IQR) 26–38 years).

Between 2007 and 2013, 17,849 OST episodes were opened in the JH&FMHN Drug and Alcohol Database. In just over one-third of these (n = 6566; 37%), OST was initiated in prison. The remainder of OST