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Implementation of Client Incentives within a Recovery Navigation Program

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ABSTRACT

Objective: Multiple detoxification admissions among clients with substance use disorders (SUD) are costly to the health care system. This study explored the impact on behavior and cost outcomes of recovery support navigator (RSN) services delivered with and without a contingent incentive intervention.
Methods: New intakes at four detoxification programs were offered RSN-only (N = 1116) or RSN plus incentive (RSN + I; N = 1551) services. The study used a group-level cross-over design with the intervention in place at each clinic reversed halfway through the enrollment period. RSN + I clients could earn up to $240 in gift cards for accomplishing 12 different recovery-oriented target behaviors. All eligible clients entering the detoxification programs were included in the analyses, regardless of actual service use.
Results: Among RSN + I clients, 35.5% accessed any RSN services compared to 22.3% in the RSN-only group ($p < .01$). Of RSN + I clients, 19% earned one, 12% earned two and 18% earned three or more incentives; 51% did not earn any incentives. The majority of incentives earned were for meeting with the RSN either during or after detoxification. Adjusted average monthly health care costs among clients in the RSN-only and RSN + I groups increased at a similar rate over 12 months post-detoxification.
Discussion: Possible explanations for limited uptake of the incentive program discussed include features of the incentive program itself, navigator-client communication, organizational barriers and navigator bias. The findings provide lessons to consider for future design and implementation of multi-target contingency management interventions in real-world settings.

1. Introduction

Clients who use detoxification services are frequently readmitted in a "revolving door" pattern. Data from the Massachusetts Behavioral Health Partnership (MBHP), a Beacon Health Options company that manages behavioral health benefits for over 400,000 Medicaid enrollees in Massachusetts, indicate that among their population of unique clients treated in detoxification programs during state fiscal year 2011, nearly six in ten (57.7%) had two or more detoxification admissions within a twelve-month period. These repeat detoxification users, approximately 3300 individuals, accounted for more than 87% of the detoxification episodes at a cost of more than $13.5 million. While relapse and readmission are not unexpected in the treatment of substance use disorders, frequent detoxification admissions are very expensive. To address these challenges, since 2009, MBHP clients leaving detoxification programs have been offered the opportunity to meet with Community Support Program (CSP) staff to help them navigate their recovery. CSPs assist the client with attaining clinical treatment plan goals in outpatient services and/or other levels of care and work to mitigate barriers to doing so. However, utilization of these services was low. The interventions tested in this study are based on enhancement of the CSP model designed to improve utilization.

Recognizing the potential value of contingent incentives used to improve outpatient substance abuse treatment outcomes (Higgins et al., 2007; Ledgerwood, Alessi, Hanson, Godley, & Petry, 2008; Stitzer, 2006; Svikis, Lee, Haug, & Stitzer, 1997), the Centers for Medicare & Medicaid Services (CMS) funded a Health Care Innovation Award to conduct a study of enhanced case management services, termed

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recovery support navigator (RSN) services. This study provided an opportunity to develop and test an intervention involving two major components 1) enhanced training for RSNs who would provide flexible support services; and 2) provision of contingent incentives for detoxification clients (RSN plus incentive [RSN + I]). Because the sponsoring agency was specifically interested in cost containment, this paper provides data on cost outcomes as well as service utilization among those exposed to RSN services with and without incentives.

We hypothesized that health care costs would be reduced for patients who were offered incentives compared to those who were not, based on evidence that incentives can motivate better health behaviors (Kane, Johnson, Town, & Butler, 2004). Mechanisms by which incentives might have reduced costs in our study context included motivating clients to stay in closer touch with their RSN and increasing the likelihood of entry into SUD treatment after detoxification. Several previous studies have found SUD treatment entry to be associated with subsequent reductions in health care costs (e.g. Holder, 1998; Parthasarathy & Weisner, 2005), although other studies found increases or no change (Barnett, Trafton, & Humphreys, 2010; Stecker, Curran, Han, & Booth, 2007).

2. Materials and methods

2.1. Study setting

Four provider organizations were involved in implementing the special care interventions. They accounted for approximately half of the detoxification admissions among MBHP clients in the year prior to the study. These providers, with programs located in the Northeast and Boston, Southeast and Greater Boston, Southeast only, and Central areas of Massachusetts, had internally developed case management services prior to the study and also offered an array of SUD treatment services.

2.2. Study design

The overall study entailed a three-group design implemented in a total of 13 clinics that compared two intervention groups to each other and to a treatment as usual control. The two active interventions were: (1) specialized care management with a recovery support navigator (RSN-only) and (2) specialized care management with an RSN plus incentives (RSN + I). This paper focuses exclusively on the comparison between the RSN-only and RSN + I study arms to assess the impact of the incentives. Effects of the recovery support navigator (RSN) intervention versus treatment as usual will be reported separately.

This was not a randomized trial. Rather, the study employed a group-level cross-over design among the four intervention sites to reduce the impact of provider differences on outcomes. Thus, two providers implemented the RSN + I intervention first and two started with RSN-only. Subsequently, providers switched to the other intervention. The nine treatments as usual clinics were not included in the cross-over design. The first enrollment period ran from March to November 2013, and the second (after interventions switched) from December 2013 to September 2014. Service provision continued through March 2015. Fig. 1 illustrates the cross-over design.

2.3. Study population

Participants were MBHP adult clients aged 18 to 64 years old who used detoxification services at any of the four interventions or nine treatments as usual clinics during the enrollment period, had at least one prior authorized detoxification episode within the previous 12 months, and were enrolled in Massachusetts Medicaid program's (MassHealth) Primary Care Clinician (PCC) Plan, a state-administered managed care program. Behavioral data were based on the first eligible treatment episode, and post-treatment cost data were based on that treatment entry even if the client was subsequently re-admitted and exposed to an alternative treatment. In addition, all eligible clients were included in the claims analyses independent of whether the client actually agreed to or received any RSN services. Since only administrative data were used, client consents were not required for the study's cost analyses, the primary interest of the sponsoring agency.

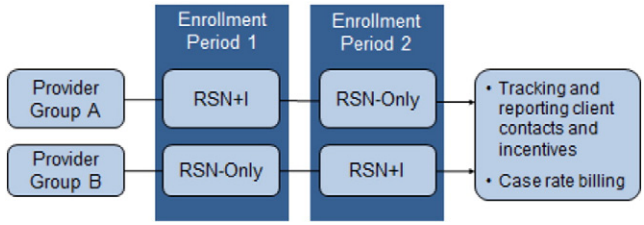

Fig. 1. Recovery support navigator (RSN) + incentives study design shows the cross-over design used in the study. Providers in group A started with the RSN + I service while those in group B started with the RSN-only service. About half-way through the study, the providers changed to the other approach. Intervention providers were paid through a case rate and RSNs received specialized training. RSN + I providers offered incentives to clients in their intervention group.

Table 1 provides demographic and medical characteristics of the study-eligible population by intervention group. About two-thirds of clients in each group were male and most were 30 years old or older. Half had had a detoxification admission less than 90 days before the index detoxification admission and eight of ten had mental health diagnoses. Charlson Comorbidity Index scores based on number of ICD diagnoses (Charlson, Pompei, Ales, & MacKenzie, 1987) were similar across the two groups. However, RSN + I clients were more likely to

Table 1
Characteristics of clients in the RSN-only and RSN + I groups (N = 2667).

	RSN-only (n = 1116)	RSN + I (n = 1551)
	N (%)	N (%)
Total	1116 (41.8)	1551 (58.2)
Gender		
Female	400 (35.8)	528 (34.0)
Male	716 (64.2)	1023 (66.0)
Age		
18–24	171 (15.3)	194 (12.5)
25–29	242 (21.7)	304 (19.6)
30–39	327 (29.3)	480 (31.0)
40+	376 (33.7)	573 (36.9)
Prior detoxification past year		
≤90 days	551 (49.4)	825 (53.2)
>90 to 365 days	565 (50.6)	726 (46.8)
Mental health diagnosis	882 (79.0)	1193 (76.9)
Charlson comorbidity (0 = no comorbidity; higher score indicates more comorbidity)		
Charlson 0	674 (60.4)	901 (58.1)
Charlson 1	273 (24.5)	395 (25.5)
Charlson 2	81 (7.2)	131 (8.4)
Charlson 3	32 (2.9)	36 (2.3)
Charlson 4	56 (5.0)	88 (5.7)
Medicaid Eligibility[1,*]		
Disabled	324 (29.3)	445 (28.9)
Non-disabled (TANF)	314 (28.4)	287 (18.6)
Basic	99 (8.9)	121 (7.8)
Essential	370 (33.4)	689 (44.7)
Medicaid enrolled prior to index detoxification[*]		
≤1 year	186 (16.8)	314 (20.4)
>1 year	921 (83.2)	1228 (79.6)

[*] p-value <.05
[1] Medicaid eligibility categories: (1) Disabled = low-income clients who are determined to be permanently and totally disabled. (2) Non-disabled = low-income clients without documented disabilities, primarily families and children. (3) Basic = adults under age 65 who are either receiving cash assistance from the Emergency Assistance to Elderly, Disabled and Children (EAEDC) program due to a disability lasting at least 60 days and not eligible for unemployment benefits or receiving training from Massachusetts Rehabilitation Commission. (4) Essential = low-income adults who have been unemployed for more than one year.

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