Pay for Performance and Treatment Outcome

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Introduction

Pay for Performance (P4P): Models which offer fiscal incentives to medical and behavioral health providers for meeting specific expectations related to patient care have gained popularity over the last decade as a means of improving quality of care (Bremer et al., 2008). Research by McLellan et al. (2008) has supported the feasibility of implementing such programs and the openness of substance abuse treatment facilities to participating in P4P.

Treatment Retention: P4P is based on the assumption that use of a financial reward will promote greater provider attention to patient attendance thereby improving outcomes (Roux et al., 2009). To date, studies examining retention rates following implementation of P4P strategies have yielded equivocal results (Brucker & Stewart, 2011; Vandrey et al., 2011).

Factors Influencing Treatment Outcomes: Numerous barriers to treatment engagement exist and include a) the presence of a co-morbid psychiatric disorder such as depression or anxiety, b) the existence of a chronic medical condition such as HIV or Hepatitis-C, and c) a history of trauma. Bogenschutz and Siegfried (1998) observed that a dually diagnosed population attended an average of only 34% of scheduled outpatient sessions. Chronic medical conditions have also been cited as a risk factor for poorer treatment outcomes, especially for women (Comfort et al., 2003). The issue of trauma is also of significance, with findings indicating that patients with a trauma history or PTSD not faring as well as individuals without such a history (Brown et al., 1996; Saladin et al., 1995). Hien et al. (2000) observed that a medication assisted treatment population with a history of PTSD evinced significantly worse early treatment (i.e., first three months) outcomes (positive urine drug screens).

P4P in Philadelphia: Pay for performance criteria were introduced into the Philadelphia Behavioral Health System in 2012. Providers meeting prescribed engagement criteria are eligible for an end of year payment. While there is anecdotal evidence within the system that the introduction of these P4P criteria have led to improved provider attention to early engagement, evaluation data are scarce.

In response, the present study was conducted to assess whether individuals meeting early engagement criteria proposed by Philadelphia's Community Behavioral Health (a Medicaid HMO for behavioral health) demonstrated better outcomes as measured by urine drug screen results obtained at six and 12 months post-intensive outpatient (IOP) initiation.

Hypothesis 1: Patients who met the two early engagement criteria at 14 days (4 or more days of service) will demonstrate better outcomes as measured by urine results obtained at six and 12 months post-IOP initiation.

Hypothesis 2: Patients who met the two early engagement criteria at 30 days (8 or more days of services) will demonstrate better outcomes as measured by urine results obtained at six and 12 months post-IOP initiation.

Method

The data for these analyses were drawn from 76 consecutive admissions to medication assisted treatment for opiate dependence who, following assessment, were referred to the intensive outpatient level of care. The IOP level of care carries an expectation of ***nine hours of attendance per week*** for a period of minimally 16 weeks. Seventeen of these 76 individuals (30.3%) did not receive any IOP services in the 30 days following their assignment. To allow for the most complete analysis, these individuals were designated as not having met the P4P criteria.

The P4P criteria for the intensive outpatient level of care are the delivery of four days of service within the first 14 days of treatment and the delivery of eight days of service within the first 30 days of treatment.

Attendance information and urine drug screen results were extracted from the clinical record. The proportion of urine drug screens positive for opioids served as the primary outcome measure. A series of analyses crossing P4P 14 and 30 day criteria-met status and urine results for opioid use at six and 12 months were conducted.

Outcome Measure

- Urine Drug Screens for Opioids

Results

Subjects were primarily male (58%) and White (72%). The average admission age was 40.29±10.79 years. In general, participants were not treatment naïve (67%). Intravenous use of opioids was the most common route of administration (62%) and mean years of opioid use were 13.65±8.04. Table 1 displays the number of cases meeting the IOP P4P criteria at 14 and 30 days post IOP initiation. Three quarters of the cases met the insurer established P4P criteria at 14 and 30 days post treatment initiation.

Table 1.

	P4P +	6 months	12 months	N
P4P + 14	59	46.3%	37.0%	71
P4P + 30	57	46.2%	38.5%	71

Results (continued)

Hypothesis 1: As can be seen in Table 1, participants meeting the 14 day P4P criteria (minimally 4 days of service) were no less likely to be using opiates at 6 months (46.3%) than those who did not (35.3%), x2 = .64, p = ns.

Hypothesis 1A: As can be seen in Table 1, participants meeting the 14 day P4P criteria (minimally 4 days of service) were no less likely to be using opiates at 12 months (37%) than those who did not (41.2%), x2 = .64, p = ns.

Hypothesis 2: With respect to Hypothesis 2, we observed minimal beneficial effect of having met the 30 day P4P criteria. Specifically, individuals with 8 or more services were no less likely to be using opiates at six months (46.2%) than those who did not (36.8%), x2 = .491, p = ns.

Hypothesis 2A: Similar effects were observed for 12 month urinalysis results; individuals who met 30 day P4P criteria were no less likely to be using opiates at 12 months (38.5%) than those who did not (36.8%), x2 = .015, p = ns.

Discussion

This study represents one of the first attempts at evaluating the effect of fulfillment of P4P criteria on illicit opiate use in a medication assisted treatment population. The assumption was that increased patient contact with the environment of care would lead to increased motivation for treatment and therefore, decreased substance use. Interestingly, the results did not support these hypotheses around the impact of engagement on substance use. Previous research (Roux et al., 2009) has supported P4P's role in improved outcome, particularly as a result of increased provider attention to patient attendance. One possible explanation for the absence of a relationship is that early engagement in group and individual therapy, while undeniably positive steps in the recovery process, ultimately are not directly linked to dose increases/ stabilization on methadone. Future research should focus on methods that not only promote regular attendance but also expedite methadone stabilization.

References

Blake, D.D., Weathers, F.W., Nagy, L.M., Kaloupek, D.G., Gusman, F.D., Charney, D.S., & Keane, T.M. (1995). The development of a clinician-administered PTSD scale. *Journal of Traumatic Stress, 8*(1), 75-90.

Bogenschutz, M., & Siegfried, S. (1998). Factors affecting engagement of dual diagnosis patients in outpatient treatment. *Psychiatric Services, 49*(10), 1350-1352.

Bremer, R.W ., Scholle, S.H., Keyser, D., Knox Houtsinger, J.V., & Pincus, H.A. (2008). Pay for performance in behavioral health. *Psychiatric Services, 59*(12), 1419-1429.

Brown, P.J., Stout, R.L., & Mueller, T. (1996). Posttraumatic stress disorder and substance abuse relapse among women: A pilot study. *Psychology of Addictive Behaviors, 10*(2), 124-128.

Brucker, D.L., & Stewart, M. (2011). Performance-based contracting within a state substance abuse treatment system: A preliminary exploration of differences in client access and client outcomes. *Journal of Behavioral Health Services and Research, 38*(3), 383-397.

Cacciola, J.S., Alterman, A.I., McLellan, A.T., Lin, Y.T., & Lynch, K.G. (2007). Initial evidence for the reliability and validity of a "Lite" version of the Addiction Severity Index. *Drug and Alcohol Dependence, 87*(2-3), 297-302.

Comfort, M., Sockloff, A., Loverro, J., & Kaltenbach, K. (2003). Multiple predictors of substance-abusing women's treatment and life outcomes: A prospective longitudinal study. *Addictive Behaviors, 28*(2), 199-224.

Hien, D.A., Nunes, E., Levin, F.R., & Fraser, D. (2000). Posttraumatic stress disorder and short-term outcome in early methadone treatment. *Journal of Substance Abuse Treatment, 19,* 31-37.

McLellan, A.T., Kemp, J., Brooks, A., & Carise, D. (2008). Improving public addiction treatment through performance contracting: The Delaware experiment. *Health Policy, 87*(3), 296-308.

Roux, P., Carrieri, M.P., Cohen, J., Ravaux, I., Poizot-Martin, I., Dellamonica, P., & Bruno, S. (2009). Retention in opioid substitution treatment: A major predictor of long-term virological success for HIV-infected injection drug users receiving antiretroviral treatment. *Clinical Infectious Diseases, 49,* 1433-40.

Saladin, M.E., Brady, K.T., Dansky, B.S., & Kilpatrick, D.G. (1995). Understanding comorbidity between PTSD and substance use disorders: Two preliminary investigations. *Addictive Behaviors, 20*(5), 643-655.

Vandrey, R., Stitzer, M.L., Acquavita, S.P., & Quinn-Stabile, P. (2011). Pay-for-performance in a community substance abuse clinic. *Journal of Substance Abuse Treatment, 41*(2), 193-200.

Weathers, F. W., Litz, B. T., Herman, D., Huska, J., & Keane, T. (1994). The PTSD checklist-civilian version (PCL-C). *Boston, MA: National Center for PTSD*.