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Impact of a mental health based primary care program on emergency department visits and inpatient stays☆

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ABSTRACT

Objective: Integrating primary care services into specialty mental health clinics has been proposed as a method for improving health care utilization for medical conditions by adults with serious mental illness. This paper examines the impact of a mental health based primary care program on emergency department (ED) visits and hospitalizations.

Method: The program was implemented in seven New York City outpatient mental health clinics in two waves. Medicaid claims were used to identify patients treated in intervention clinics and a control group of patients treated in otherwise similar clinics in New York City. Impacts of the program were estimated using propensity score adjusted difference-in-differences models on a longitudinally followed cohort.

Results: Hospital stays for medical conditions increased significantly in intervention clinics relative to control clinics in both waves (ORs = 1.21 (Wave 1) and 1.33 (Wave 2)). ED visits for behavioral health conditions decreased significantly relative to controls in Wave 1 (OR = 0.89), but not in Wave 2. No other significant differences in utilization trends between the intervention and control clinics were found.

Conclusion: Introducing primary care services into mental health clinics may increase utilization of inpatient services, perhaps due to newly identified unmet medical need in this population.

1. Introduction

Serious mental illness (SMI) is associated with a reduction in life expectancy of about 8 years [1], relative to the general population, with the excess mortality driven primarily by physical health conditions, such as cardiovascular disease and cancer [2–4]. The causes of poor health in this population are complex. They include common social determinants of health, such as poverty, poor health behaviors, such as smoking, disparities in medical care [5,6], and adverse side-effects of medications used to treat mental illnesses [7]. Treatment of physical health conditions among adults with serious mental illness has historically been a challenge for the health care system due to fragmentation between the specialty mental health sector, where mental illnesses are treated, and general medical care, where physical health conditions are treated. Fragmentation, it is thought, constitutes a barrier to preventive care and management of physical health conditions, and contributes to inappropriate utilization of health care services, including high use of emergency department care and inpatient stays. Mental illness is associated with more frequent emergency department visits [8,9], high risk for ambulatory care sensitive hospital admissions [10–13] and re-hospitalization [14] for physical health conditions.

One strategy for improving care for physical health conditions among adults with serious mental illness is to reduce fragmentation by integrating care for physical health conditions into specialty mental health clinics [15]. This model of integrated care has several potential advantages. First, it locates physical health care within the clinics that already serve as the primary point of contact with the health care system for adults with serious mental illness, greatly reducing the

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burden of obtaining care. Patients may be more comfortable receiving care in these settings, given the high rates of discrimination they report in general medical settings [16]. Second, co-location of physical and mental health care has the potential to improve integration between treatments for diverse medical conditions. Providers in specialty mental health clinics are likely to have broader understanding of their patients' lives that they can bring to bear on providing care that addresses the full scope of their needs. However, there is also evidence that simple co-location, without policies to actively promote integration, do not positively affect care [17]. Mental health based primary care services have been supported by the Substance Abuse and Mental Health Services Administration through the Primary Behavioral Health Care Integration (PBHCI) program, which has provided grants to over 150 mental health clinics since 2009 [18–20]. PBHCI grantee clinics are funded to provide screening and monitoring of common chronic physical health conditions along with wellness service, such as smoking cessation or physical activity groups, to their patients.

Despite the potential advantages and the ongoing policy efforts, the potential impact of providing access to primary care services in specialty mental health clinics on utilization of emergency departments and inpatient services by adults with SMI is unclear. On the one hand, the expectation is that engagement in primary care will reduce emergency room visits, and have a preventive impact on serious medical events that require hospitalization. Given that these events reflect poor health outcomes for patients and are costly to the health care system, reducing their frequency is a highly desirable outcome. On the other hand, if patients have not been receiving adequate primary care services, they are likely to have unmet needs for medical care. If these patients gain access to primary care and have their needs identified, their utilization of intensive medical services may increase, rather than decrease. Providing needed care to an underserved population is also a desirable outcome.

In fact, evidence to date on the impact of improving access to primary care on use of emergency departments and inpatient stays is mixed. A primary care based medical home program was found to reduce emergency department visits in North Carolina [21]. However, a Medicaid experiment in Oregon found that increasing insurance coverage resulted in an increase in emergency department visits [22]. In an RCT that tested integration of primary care services into a specialty mental health clinic for patients with SMI and a comorbid physical condition, the integrated care program did not impact either emergency room visits or inpatient stays, although the follow-up period for that study was only 12 months [23]. A study of a PBHCI clinics in Oregon found that the integrated care program reduced inpatient stays but did not impact emergency department visits [24]. No studies have had examined the impact of this model using claims data, which include information on care utilization of ED and inpatient services regardless of where those services occurred.

This study examines the impact of PBHCI, an intensive, grant-funded mental health based primary care program on utilization of emergency departments and inpatient services in the state of New York, where 7 PBHCI programs were implemented in two waves. The study adds to the literature by examining this model of care using Medicaid claims data, which capture the vast majority of care received by Medicaid enrollees. It also provides an example of the effects that the program can have on when implemented in a range of 'real world' clinical settings.

2. Methods

2.1. Data source

Data come from a Medicaid claims data warehouse maintained by the New York State Office of Mental Health (OMH). The database includes all Medicaid enrolled individuals who received a behavioral health service in the past five years, where behavioral health service is defined broadly to include 1) visits that occurred in a behavioral health clinic setting, 2) visits in any setting with a psychiatric diagnosis, or 3) prescriptions for a psychiatric drug. For these individuals, the database includes all Medicaid claims and managed care encounter data, including client demographic, enrollment, prescription drug and service utilization, including all general medical and behavioral health inpatient, outpatient, and emergency services. All study procedures were approved by the IRBs of the RAND Corporation and the New York State Office of Mental Health.

2.2. Intervention and control clinics

The first two waves of PBHCI grants awarded to clinics in NYS were included in this study (later waves were not included due to limited time of service provision after receiving the grants). Four clinics received grants in 2010 and began providing services in February 2011, and another three clinics were awarded grants in 2012 and began providing services in February 2013. These PBHCI grantees are all specialty mental health clinics licensed by OMH and located in New York City. The 40 community based OMH licensed clinics located in New York City which did not have a co-license or operating certificate to provide primary care services were used as controls.

2.3. Study period

Analyses were conducted separately for each of the two waves of PBHCI grants due to their different start dates, as shown in Fig. 1. The pre-PBHCI baseline period for each wave was defined as the two years prior to initiation of PBHCI services, February 2009 through January 2011 for wave 1 and February 2011 through January 2013 for wave 2. PBHCI grants provided funds for the program for a 4-year period. The PBHCI intervention period included the period from the initiation of PBHCI services though the most recent date for which complete claims data are available, February, 2015.

2.4. Study sample

The sample includes enrollees, age 18 through 64, who were continuously enrolled in Medicaid, and received treatment in a study clinic (either PBHCI or control), during both the baseline and intervention periods. Continuous enrollment was defined, following prior studies [25], as having at least nine months of enrollment during a year with no

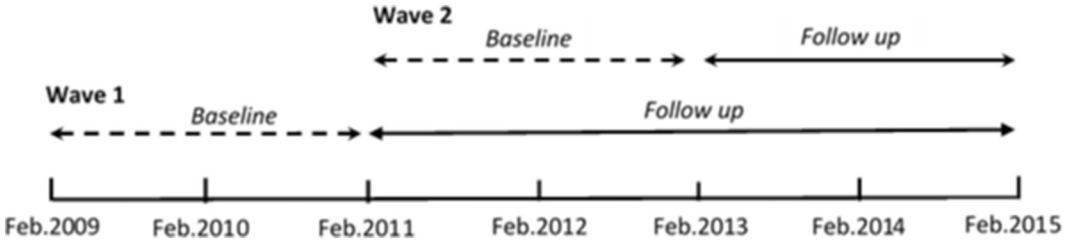

Fig. 1. Intervention timeline.