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Brief Research Report:

Fountain House and Use of Healthcare Resources

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Context

Fountain House is a service organization dedicated to improving the lives of people with mental illness. In New York City, Fountain House provides residential rehabilitation for selected individuals. It is unclear how often these individuals use other health services, such as inpatient admissions, emergency department (ED) visits, or outpatient care visits. It is also unclear how their use of these services compares to similar individuals who use residential rehabilitation services elsewhere in New York City.

Objective

This report examines **the use of health services among individuals who use Fountain House for residential rehabilitation.**

Methods

Data Source. We analyzed New York State Medicaid Claims 2010 – 2013 for this work. Our data is a “limited dataset”, with dates of service and dates of birth, but no other personal health information. Use of the data is covered by a data use agreement allowing researchers at Weill Cornell Medical College to support clinical transformation efforts in New York State. The Fountain House intends to use this information to inform activities related to the New York State Delivery System Reform Incentive Program (DSRIP), an example of such a clinical transformation effort.

Study Design. We performed a retrospective cohort study examining the use of health services (inpatient, ED, and outpatient) among individuals who used residential rehabilitation services at Fountain House in 2011. We followed their use of health services in each quarter from 2010 through 2013. We compared their use of health services to a group of individuals who used residential rehabilitation services at other New York City organizations, over the same period of time.

Study Groups. We identified Fountain House members by searching for Medicaid Beneficiaries with a 2011 claim for rate code “4369 Monthly Rehabilitative Fee”, “4370 Semi-Monthly Rehab Fee – 1st Half”, or “4371 Semi-Monthly Rehab Fee – 2nd Half” associated with the National Provider Identification (NPI) of 1578642054 (Fountain House). We created a comparison group who met the following criteria: (1) a 2011 claim for a rate code of 4369, 4370, or 4371 *not* associated with the Fountain House NPI, and (2) a home zip code in New York City.

Baseline Characteristics. In order to understand baseline differences between the groups, we compared several characteristics. We examined age and gender. We reviewed five measures of comorbidity burden, generated by the Johns Hopkins ACG system. These were (1) the number of aggregated diagnosis groups (ADGs), (2) the percentage with 3 or more ADGs, (3) the number of chronic conditions, (4) the percentage with five or more chronic conditions, and (5) an indication of frailty. We also compared the presence of three psychiatric comorbidities and five medical comorbidities.

Results

We identified 75 individuals who used residential rehabilitation services at Fountain House in 2011, and a comparison cohort of 2687 New York City residents who used similar services at other organizations.

The Fountain House group was, on average, older than the New York City cohort (median age 52 vs. 45). Two thirds of each group were men.

The Fountain House group had a similar comorbidity burden to the New York City cohort. There were no differences in the major ADG count, nor in the percentage of individuals with 3 or more ADGs. Individuals in the Fountain House group had slightly fewer chronic conditions (median 4 vs. 5) but a similar number of individuals with 5 or more chronic conditions, and a similar number with indications of frailty, compared to the New York City cohort. There were no significant differences in the prevalence of hypertension, diabetes, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), nor ischemic heart disease between the two groups.

There were differences in the psychiatric comorbidity patterns in the two groups. The Fountain House group was more likely to have schizophrenia (91% vs. 81%) but less likely to have depression (16% vs. 38%) or bipolar disease (11% vs. 38%). (Table 1)

Table 1. Characteristics of Medicaid Beneficiaries with a Claim for "Monthly Rehabilitation Fee" in 2011 at Fountain House and a New York City Comparison Group

Characteristics		Fountain House Cohort (N = 75)	NYC Cohort (N = 2687)	Significance
<i>Demographics</i>	Age (Median [IQR])	52 [40 - 59]	45 [35 - 52]	p < 0.001
	Male (%)	67%	67%	ns
	New York City	99%	100%	ns
<i>Comorbidity Indices</i>	Major ADG Count (Median [IQR])	2 [1 - 2]	2 [1 - 3]	ns
	Major ADG Count ≥ 3 (%)	23%	25%	ns
	Chronic Condition Count (Median [IQR])	4 [2 - 6]	5 [3 - 7]	p < 0.05
	Chronic Conditions ≥ 5 (%)	39%	50%	p = 0.06
	Frailty Flag	9%	16%	ns
<i>Psychiatric Comorbidities</i>	Schizophrenia	91%	81%	p = 0.05
	Depression	16%	38%	p < 0.001
	Bipolar	11%	38%	p < 0.001
<i>Medical Comorbidities</i>	Hypertension	47%	44%	ns
	Diabetes	28%	28%	ns
	COPD	9%	6%	ns
	Ischemic Heart Disease	7%	7%	ns
	CHF	1%	3%	ns

IQR. Interquartile Interval

COPD. Chronic Obstructive Pulmonary Disease

CHF. Congestive Heart Failure

ns. Not Significant

Individuals in the Fountain House cohort were consistently less likely to go to the emergency department (ED) or be admitted to the hospital compared to the New York City cohort. For example, from 2010 to 2013, the Fountain House cohort were **admitted to the hospital** at a rate of 0 – 11 admissions per quarter per 100 people, which was consistently less than the rate in the New York City cohort of 17 – 23 admissions per quarter per 100 people. In addition, over the same time period, the Fountain House cohort **visited the ED** at a rate of 0 to 12 visits per quarter per 100 people, which was consistently less than the New York City Cohort rate of 14 to 20 visits per quarter per 100 people. There were no clear differences in the rate of outpatient care visits between the two groups. (Figure 1)

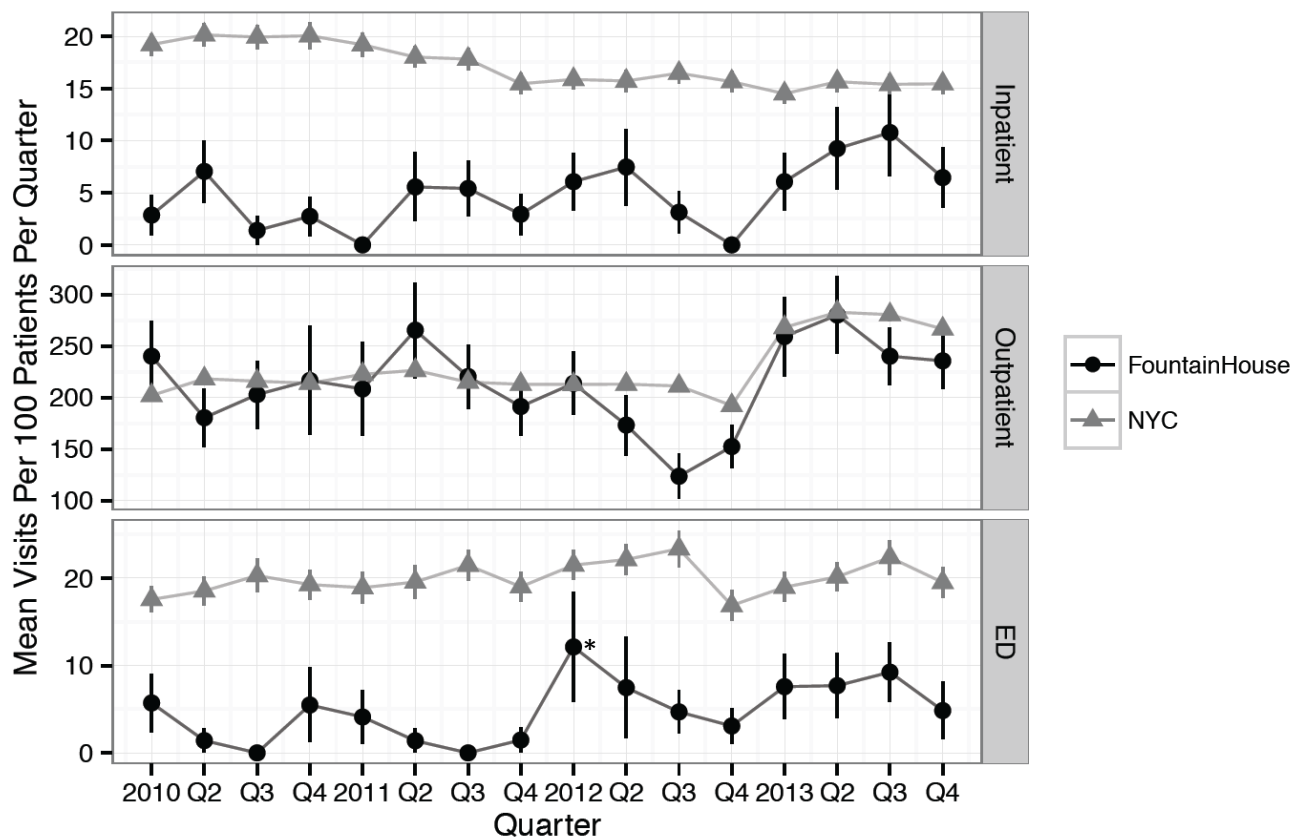


Figure 1. Use of health services among Fountain House residential rehabilitation patients (*), compared to a similar New York City cohort (▲). Error bars represent standard error of the mean. In 2012 Q1, one patient visited the emergency department (ED) 4 times (*) which explains the transient increase in in ED visits in that quarter. The Fountain House cohort was identified based on a Medicaid claim at Fountain House for Monthly Rehabilitation Fee in 2011.

Conclusions

Individuals who use the Fountain House for residential rehabilitation services are roughly similar to individuals who use residential rehabilitation services elsewhere in New York City; however, they are consistently less likely to be admitted to the hospital or to use the emergency department.

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