"The Pandemic Made Me Do It": Admission Outcomes in Inpatient Psychiatric Units during the COVID-19 Pandemic

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Aims: Our research aims at identifying the impact of the COVID 19 pandemic on the severely mentally ill patients as well as on mental health providers' behavior in inpatient psychiatric units in the Bronx, New York – an area severely affected by this crisis.

Background: The COVID-19 pandemic has negatively affected the wellbeing and mental health of millions of people around the world. It has also highlighted healthcare disparities across groups based on social, racial, ethnic, economic and environmental characteristics.

The prolonged shelter at home, the psychosocial effects of severe isolation and public restrictions, the stressors such as fear of contracting the illness and isolation, the grief, as well as the possible direct effects of the virus on the central nervous system have all impacted the general population, with greater effect on vulnerable populations. For such groups - including the severely mentally ill, COVID-19 has also created significant barriers in access to health services, partially due to the disruption of services, an overwhelmed healthcare system and the pressure on medical professionals. The pandemic has likely caused a significant impact on the lives of the severely mentally ill, manifesting as relapse in their illness and possibly causing more severe symptoms.

Methods: We analyzed a total of 1110 visits to our inpatient psychiatric unit, comparing demographic information and the course of hospitalization between admissions in 2019 (prior to the pandemic) vs. 2020 (during the peak of the pandemic). We reviewed different factors such as patient demographics, time since last admission, length of stay, use of emergent medication and physical restraints. Data was analyzed with statistical software using regression.

Results: 50.8% of patients admitted in admissions reviewed in 2020 received IM STAT medication, Vs. 34.6% in the respective period in 2019. We found significantly higher number of IM emergent medications per patient in 2020 Vs. 2019 ($t=5.47$, $p<0.00001$), reflecting both a higher level of acuity of patients as well as possible higher burnout among healthcare providers, Note that although the overall average length of stay was the same when comparing the two periods, when we analyzed it month by month we saw that during March 2020, when the pandemic began and New York was severely impacted, the length of stay was significantly shorter (3 days less).

Table 1: Demographic Information

		2019	2020
Gender	Male	324 (57%)	290 (53%)
	Female	242 (43%)	257 (47%)
	Total	566	547
Average Age		40.28	39.11
Race	African American	282 (49.8%)	292 (54%)
	Hispanic	243 (43%)	221 (40.4%)
	Caucasian	24 (4.2%)	20 (3.6%)
	Asian	10 (1.8%)	2 (0.4%)
	Other	7 (1.2%)	9 (1.6)
	Total	566	547
Type of Residence	Home	288 (51%)	312 (57%)
	Residence	142 (25%)	112 (20.4%)
	Shelter	77 (13.6%)	97 (18%)
	Homeless	57 (10%)	18 (3.2%)
	NA	2 (0.4%)	8 (1.4%)
	Total	566	547
Type of Household	Single	331 (58.5%)	305 (55.8%)
	Family	228 (40.3%)	236 (43.1%)
	Room Mate	7 (1.2%)	6 (1.1%)
	Total	566	547
Marital Status	Married	29 (5.1%)	41 (7.5%)
	Domestic Partner	18 (3.1%)	25 (4.6%)
	Divorced / Separated	16 (3%)	15 (2.7%)
	Single	499 (88.1%)	462 (84.5%)
	Widower	4 (0.7%)	4 (0.7%)
	Total	566	547

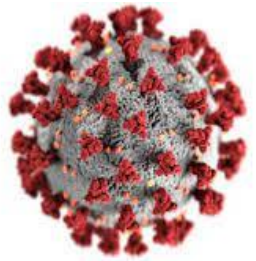

Table 2: Top Diagnosis

	2019	2020
Schizophrenia	187 (33%)	174 (31.8%)
Schizoaffective Disorder	128 (22.6%)	144 (26.4%)
Bipolar Disorder	80 (14.2%)	106 (19.4%)
Major Depressive	70 (12.4%)	37 (6.8%)
Substance Induced Mood Disorder	37 (6.5%)	19 (3.5%)
Psychotic Disorder	16 (2.8%)	21 (3.9%)
Other	48 (8.5%)	46 (8.4%)
Total	566	547

Table 3: Characteristics of Admission

		2019	2020
Average Length of Stay (in days)		18.51	17.93
Use of IM medication			
	No	370 (65.4%)	269 (49.2%)
	Yes	196 (34.6%)	278 (50.8%)
	Total	566	547
Average Number of IM medication per patient		1.19	2.63
Use of Physical Restrains	No	525 (92.8%)	474 (86.7%)
	Yes	41 (7.4%)	73 (13.3%)
	Total	566	547
Average Number of restrains per patient		3.2	2.3

Discussion: Our findings reflect how COVID-19 has possibly affected the acuity of symptoms of the severely mentally ill patients admitted to an inpatient psychiatric unit and higher burnout among healthcare providers, possibly affecting the level of care. This invites a debate regarding differences in mental health providers' behavior and how burn out affects the treatment we provide. To the best of our knowledge this is the only significant quantitative study looking at inpatient psychiatry during the pandemic from the aspects of demographics and hospitalization characteristics. Our patient population includes minorities with significant comorbidities who in large percentages don't have social support, have limited access to food, education, medications, and other medical services. All this was exacerbated during the pandemic. We now know that although the Bronx did not have the highest rate of COVID-19 cases among the City's boroughs the outcomes in the Bronx were more severe, with the highest hospitalization and death rates. unemployment peaked to the highest rate among all the boroughs and there was also a spike in violence. Our patients were left for the worse during the pandemic. They had limited access to technology, telehealth, and many of them did not have access to their mental health providers and ACT teams: they were often being switched from long-acting injection to oral medication. They arrived to an overwhelmed unit, with exhausted staff, where they also had no visits and limited activity so there was also nothing to do, and they were also afraid of contracting the virus when being hospitalized, involuntary during a worldwide pandemic. All these factors were possibly also fueling aggression. They were more violent, and we reacted to this.

We believe that this research should also open the debate regarding how to better prepare ourselves – if by improving engagement in the community, the work that our ACT teams are doing, and also think how we can use this data to put more safety measures, train our teams, to anticipate how our patients will look like and how they will act, so that we can prevent violence towards staff, other patients and improve the quality of care that we provide.