COVID-19 Outbreak: A Tale of Two Psych Units

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ABSTRACT

Background:
COVID infections in inpatient psychiatry units present unique challenges during the pandemic, including behavioral characteristics of the patients, structural aspect of the unit, type of therapy for the patients. We present COVID outbreaks in psychiatry units in two hospitals in our medical center in Bronx, NY, and describe our mitigation strategies.
Methods:
Hospital A: In the early period of the pandemic in NY, 2 patients in the inpatient psychiatry unit tested positive for SARS-CoV-2 PCR. The unit was temporarily closed to new admissions while other patients were tested.
Hospital B: On April 1, one of the patients in a 22 bed Psychiatry unit, admitted since 3/10/20, developed high fever, dry cough and tested positive for COVID-19 PCR. She had multiple exposures in the unit to patients who were asymptomatic. Two of her close contacts tested positive for SARS-COV-2 PCR.
Results:
Hospital A: In total, 5 of the 29 patients (17.2%) in the unit were SARS-CoV-2 positive, all of whom were asymptomatic.
Hospital B: Testing of the remaining patients showed positive PCR in 10/14. PCR tests of healthcare workers (HCW) were positive in 13/46. Except for the index patient, all the patients were asymptomatic but 32/46 HCW reported symptoms. One negative patient subsequently turned positive.
Infection control and prevention strategies instituted in both hospitals were the same with subtle differences due to dissimilar burden of infection and structure of the units. Table 1 shows the timing of the outbreak and the rapid institution of preventive measures in each of the hospitals.
There was still difficulty with patients regarding adherence. Some of the patients refused to stay in isolation and would roam. Compliance with masking and hand hygiene was problematic.
Communication was of paramount importance. Multiple meetings were held between the Psychiatry staff, Infection Control and Prevention team, executive leadership of the hospital. Environmental Services and Engineering were also involved. Communications with the NY State Department of Health occurred frequently.
Conclusion:
Strategies for management of COVID-19 patients in inpatient psychiatric units depends on the density of infected patients in the hospital and in the community. The implementation of practice change may need to be rapidly adjusted depending on the situation and available resources. Contingency plans should be formulated early on.

BACKGROUND

The COVID-19 pandemic presented unique behavioral, structural, and therapeutic challenges on our inpatient psychiatry unit.

Patients in psychiatric units are usually in a closed unit with a congregate setting. Due to their mental illnesses, there is difficulty in having patients follow the primary tenets of infection control for COVID-19: isolation, quarantine, masking, social distancing, and hand hygiene. Healthcare workers in these units are also challenged by decreased staffing secondary to illness, lack of PPEs, and lack of single rooms with negative pressure.

Table 2: Testing of Patients and HCWs

	Hospital A			Hospital B		
	Patients	Staff	Total	Patients	Staff	Total
No. Tested	29	0	29	16	46	62
Positive	5	0	5	14	13	27
Symptomatic	0	0	0	1	32	33
% test positive	17.2%			87.5%	28.3%	
% with symptoms	0			7.1%	69.6%	

Table 1: Infection Control Strategies During the Outbreak

	Hospital A		Hospital B
March 2020	Masking of HCW	March 2020	Masking of HCW
	Limited Group Therapy Sessions		Restriction of visitors
	Individualized snacks		Limited patient movement
	Encouragement of hand hygiene (soap and water) among patients		Patients monitored for symptoms and VS checked
1st patient diagnosed April 5	Cohorting and isolation of positive patients	1st patient diagnosed April 1	Patient placed on isolation. Universal masking of patients and HCW
	Universal masking of HCW and patients	April 3	All patients in the unit were tested for SARS-CoV-2 PCR
	Enhanced environmental cleaning every shift		Appropriate PPEs worn by HCW caring for COVID patients.
	Recreation and dining rooms closed		All patients placed on contact and droplet precautions
	Meals provided to each patient in their rooms		Enhanced environmental cleaning every shift
	Patients monitored for symptoms; VS including O2		Meals provided to each patient in their rooms
April 6	All patients in the unit tested for SARS-CoV-2 PCR		Group sessions were suspended
	Unit closed until test results are back	April 4-5	All HCW were tested for SARS-CoV-2 PCR
	Group sessions were suspended	April	Unit converted to a COVID unit
	Appropriate PPEs worn by HCW caring for COVID patients.		
April 15	Partition barrier erected between COVID rooms and non-COVID rooms		

Building a barrier Hosp A

Swabbing the Staff Hospital B

DISCUSSION

Infection prevention strategies instituted in both hospitals were the similar with subtle differences due to varying burden of infection and structure of the units. Table 1 shows the timing of the outbreak and rapid institution of preventive measures in each of the hospitals. Hospital A built a temporary barrier separating the infected patients from the uninfected. The unit in Hospital B became a COVID unit.

Table 2 shows the testing and diagnosis of the patients in both hospitals. The rate of infection of Hospital A is comparatively low, hence the HCWs were not tested. In hospital B, there were 18 patients in the unit, however, two were discharged prior to being tested. Due to the high rate of COVID infections (87.5%), the HCWs were also tested in hospital B. Interestingly, the number of symptomatic HCWs were high, and most were furloughed.

Since the outbreaks, all patients admitted to the inpatient psychiatry units were tested for SARS-CoV-2 PCR.

Effective communication helped to stem the outbreaks. Multiple meetings were held between the Psychiatry staff, Infection Prevention and Control, and executive leadership. Environmental Services and Engineering were also involved. Communications with the NY State Department of Health occurred regularly.

Strategies as recommended by the NYS Office of Mental Health and other state guidance were followed: suspension of group therapy, isolation of patients, staff diagnosis and reporting.

FURTHER QUESTIONS

Protocols for visitation in inpatient psychiatric units are difficult to manage since one exposure can trigger infections involving a community of patients.

Use of telemedicine in patient treatment may need to be expanded.

Rooms may need to be arranged so social distancing can be achieved in group therapy

Consideration for regular testing of patients/staff as in other congregate setting. Consideration of testing of patients coming from other areas of the hospital.

CONCLUSIONS

- Strategies for management of COVID-19 patients in inpatient psychiatric units depends on the density of infected patients in the hospital and in the community.
- The implementation of practice change may need to be rapidly adjusted depending on the situation and available resources. Contingency plans should be formulated early on.

References

• New York State's guidance for hospital psychiatry providers. Thomas Smith, "Treatment Planning and Documentation Standards for Article 28/31 Hospital Psychiatry Providers During Emergency Period," New York State Office of Mental Health, 25 March 2020.

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