The emergence of Covid-19 has presented unique challenges to safely caring for patients in acute psychiatric crisis. How do those in inpatient psychiatry best minimize the risk of exposure for patients and staff, while also providing evidence-based care to patients, regardless of their Covid-19 status? The authors discuss proactive efforts to create a novel, stand-alone inpatient psychiatry unit with integrated medical support for patients with acute psychiatric illness who have tested positive for Covid-19. The article details their journey navigating the unique administrative, staffing, safety, and acute psychiatric treatment challenges during a global pandemic.

Introduction

The Covid-19 pandemic has fundamentally altered the daily lives of billions of people across the world. Although few dispute the public health and safety benefits of physical distancing, these measures may contribute to deteriorating mental health, placing increased strain on the global mental health system.1,2

Physical distancing is a challenge for inpatient psychiatry units (IPUs) designed to help stabilize patients with acute mental illness. The architectural space and programming that comprise critical components of IPUs inherently increase risk for disease spread. Unlike traditional medical units, patients on IPUs are encouraged to spend time in the units’ common areas and interact with staff and other patients to improve their mental health and wellness, making social distancing efforts difficult.3 As you can imagine, if a Covid-19–positive patient were admitted to such a unit, an ensuing mass infection would be highly likely. Unfortunately, such a scenario played out on
an IPU in South Korea, where in the early days of the pandemic, 101 patients contracted the new coronavirus, and seven patients died of the disease. The grim reality is that people suffering from serious mental illnesses are uniquely vulnerable to Covid-19 infection, with poorer prognoses relative to the general population.

To prevent a viral outbreak from tearing through an IPU, some health care systems have closed down units altogether or chosen to isolate patients in their rooms, sometimes in complete seclusion. These measures certainly help limit exposure but do little to provide needed services. Others have increased Covid-19 screenings for symptomatic patients or isolated Covid-19–positive patients on specific wings of a unit, using barriers like fire doors. Although such solutions present some added protection, having infected patients on a unit increases the risk of transmission to other patients and staff.

At a psychiatric hospital in Israel, a 16-bed IPU specifically dedicated to treating patients with both acute psychiatric needs and Covid-19 opened to address the issue. Creating a stand-alone IPU for Covid-19–positive patients arguably represents the gold-standard approach for maintaining our ability to treat patients’ psychiatric needs while minimizing the risk to other patients and staff. But due to the immense administrative, legal, and clinical barriers to creating such a specialized unit quickly, few such units have emerged.

**Responding to the Need**

Inspired by our colleagues in Israel — and in response to the explosive infection rates in our home state of New York — we devised a system for tackling these challenges at the University of Rochester Medical Center (URMC).

"The grim reality is that people suffering from serious mental illnesses are uniquely vulnerable to Covid-19 infection, with poorer prognoses relative to the general population."

First, we implemented surveillance screening for all patients before admission to our inpatient psychiatry service. Then, we proactively designed a stand-alone IPU for patients with Covid-19. Importantly, we built on our existing Medicine in Psychiatry Services to develop an integrated staffing and treatment model for the unit to best support patients’ psychiatric and medical needs during their admissions. This article describes our three-phase process for creating a Covid-19–positive IPU, including: (1) identifying an existing unit that could be adapted to support the unique treatment needs of this population; (2) moving patients currently occupying that space to an appropriate off-site location; and (3) creating the administrative, staffing, and clinical infrastructure to support the new IPU for Covid-19–positive patients.
Identifying Space for New Unit

Our first step was to find a physical location to house the new Covid-19–positive IPU. At URMC, the existing adult IPUs include one geriatric and two general adult units. Due to its unique physical layout and size, we quickly identified the existing geriatric psychiatry unit as the ideal location for the new program. With single-bed rooms, wide hallways, ample room to create personal protective equipment (PPE) donning/doffing areas, and a nursing station situated to care for patients and provide private staff work space, the unit met all of our requirements and enabled appropriate social distancing for patients and staff. Also, the space is physically separate from the other IPUs, so it offered additional layers of protection from viral spread.

Relocating Geriatric Psychiatry Unit Off-Site

After identifying the right space for the Covid-19–positive IPU, we needed a safe and therapeutic space to temporarily house the existing geriatric psychiatry service at URMC. Moving this unit off-site required close collaboration with our neighboring state psychiatric hospital. In a fortunate twist of fate, the state hospital had space to accommodate our patients. Next, our inpatient leadership team worked closely with the state hospital’s leaders to troubleshoot how to relocate our geriatric unit to the state hospital campus, which is located 0.9 miles from the main URMC location. The logistical details ranged from navigating legal considerations around opening a new unit there to organizing its day-to-day operations.

Legal Considerations: Our departmental leadership worked closely with our in-house legal services to open this temporary geriatric IPU, including close collaboration with the New York State Office of Mental Health and our local Department of Mental Health. Fortunately, before the Covid-19 crisis, our department was already state-certified to operate 66 inpatient psychiatry beds, yet we were only operating 56 beds. This gave us flexibility to expand our services. We drafted a memorandum of agreement, outlining our surge plan for the pandemic.

Staffing and Daily Operations: Next, we focused on coordinating daily operations and staffing. Ultimately, we decided that the current geriatric IPU staff would accompany the patients to the new space, including nurses, psychiatric techs, the attending psychiatrist, a psychiatric nurse practitioner, social workers, activities therapists, and psychiatry residents. We arranged for our physical and occupational therapists to continue providing consultations and/or treatment, either in person at the state campus or via telehealth. We also arranged for our inpatient psychology team to provide direct clinical support using telehealth, including individual psychotherapy for patients and mindfulness and wellness activities for staff. Coverage for after-hours emergencies would be provided by the psychiatry resident on call, with backup from the attending psychiatrist on call in our Comprehensive Psychiatric Emergency Program. The Medicine in Psychiatry Services team at URMC would provide daily medical consultation and after-hours medical support as needed. We arranged for patients to be transported to the off-site location via ambulance, and those requiring urgent medical support would be taken back to the main hospital by ambulance for evaluation in our emergency department.
Inspired by our colleagues in Israel — and in response to the explosive infection rates in our home state of New York — we devised a system for tackling these challenges at the University of Rochester Medical Center.

**Logistical Support:** The state hospital offered to provide dietary and security support to the unit, while the URMC Facilities and Services coordinated the environmental service (cleaning) and laundry support. Technologically, URMC Information Technology (IT) teams created an infrastructure within the new off-site unit to allow our staff to continue to access and document within the patients’ electronic medical records. Our IT team also worked diligently to transfer our existing mobile laptop stations and telephone lines to minimize disruptions to clinical workflow for the geriatric psychiatry team. Lastly, we had a Pyxis machine installed within the satellite unit to assist with medication availability, and we worked closely with our in-house pharmacy to ensure that prescribed medications would remain available there.

**Identifying Patients to Transfer Off-Site:** In unique cases, some patients simply could not be moved to the new campus, so we adopted an interdisciplinary approach to identify who would be most appropriate for the satellite unit. First, we agreed that many of our geriatric patients would likely benefit from the move, as being away from the main hospital would decrease their potential Covid-19 exposure. However, we also recognized the additional medical support available to our patients who are treated within the main hospital, given the proximity of our IPUs to medical units and support teams. All patients on the geriatric unit were screened for Covid-19 prior to admission. Then, we created a list of criteria to help identify which Covid-19–negative patients should be admitted to our off-site IPU versus one of our general on-site IPUs (Figure 1).
Geriatric patients meeting the criteria for the satellite unit would be given priority; however, non-geriatric patients may also be treated there when appropriate. Based on these criteria, five patients were transferred off-site when our new Covid-19–positive IPU opened at URMC.

### Creating a New Covid-19–Positive IPU

Once we developed our plan to move the geriatric IPU to the state hospital campus, we focused on establishing the new IPU for Covid-19–positive patients. Our plan was designed to ensure the safety and health of our patients and staff. Our department is dedicated to collaboration between medicine and psychiatry when treating our most vulnerable patients.7,8 Consistent with this philosophy, and given the unique needs of patients who would benefit from this service, we decided to staff the unit with an interdisciplinary team of psychiatric and medical providers. This approach supports patients’ psychiatric and physical health by creating a primary psychiatric unit with integrated medical oversight. Specifically, the unit staff included a combination of medical and psychiatric nurses, an attending who is dually boarded in family medicine and psychiatry, a psychiatric nurse practitioner, and a psychiatrically focused social worker. We also planned for the inpatient psychology team to provide additional support via telehealth, including individual psychotherapy for patients and mindfulness breaks and wellness groups for staff. Consistent with clinical recommendations, staff on the unit would be required to wear appropriate PPE during their shifts to protect their safety and minimize viral spread, and to safely don and doff their PPE in the designated space upon entering and leaving the unit.

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**Guidelines for Unit Placement for Patients Needing Inpatient Psychiatric Care**

| General On-site IPU | Off-site IPU |
|--------------------|--------------|
| - Negative Covid-19 Test | - Negative Covid-19 Test |
| - Risk of Violence or Aggression | - Low Risk of Violence or Aggression |
| - Complex Medical Needs | - Few/No Medical Needs |
| - Difficulty with PO Intake | - Stable but Awaiting Placement |
| - Catatonia |

**Covid-Positive IPU**

- Positive Covid-19 Test
- No-to-Mild Covid-19 Symptoms

Source: The author

NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society
Due to its unique physical layout and size, we quickly identified the existing geriatric psychiatry unit as the ideal location for the new program.

Identifying Patients for the Covid-19–Positive Unit: This unit is designed as a primary psychiatric unit with integrated medical support to meet the needs of patients with minimal coronavirus symptoms. Given the complex medical needs that can arise with Covid-19, we created admission criteria for this IPU to ensure our patients receive the appropriate level of medical care. Specifically, patients warranting a psychiatric admission who test positive for the virus would be triaged to this new IPU if they present as asymptomatic or with low-to-mild Covid-19 symptoms (Figure 1). In contrast, patients needing a higher level of Covid-19 care would be admitted to an inpatient medical unit, with their psychiatric care addressed by the Department of Psychiatry’s Consultation-Liaison Service at URMC.

Staff Staggering Based on Patient Census: Although we can proactively plan for the likelihood that we will encounter patients who need acute psychiatric treatment and test positive for Covid-19, in reality, we could not predict when or how many patients would need this service. Therefore, we created a staggered staffing and relocation plan based on patient census. Each phase of this plan included support from the attending physician, nurse practitioner, nurse manager, social worker, and psychologist. However, the number of nurses and psychiatry techs on the unit varies based on the number of Covid-19–positive patients admitted for acute psychiatric care (Figure 2).

FIGURE 2

Phases of Staffing for Covid-Positive IPU Based on Patient Census

| Phase 1: 1-2 Covid-Positive Patients |
|-------------------------------------|
| Patient(s) treated in Extended Observation Unit |
| Physical Distancing and Staff PPE Maintained |

| Phase 2: 2-4 Covid-Positive Patients |
|-------------------------------------|
| Geriatric IPU Relocates Off-Site |
| Covid-Positive IPU Opens |
| Staffing: 2 RNs 24/7 |

| Phase 3: 4-5 Covid-Positive Patients |
|-------------------------------------|
| Geriatric IPU Off-Site |
| Covid-Positive IPU Open |
| Staffing: 2 RNs 24/7 |
| 1 Psych Tech Mon-Fri |

| Phase 4: 6+ Covid-Positive Patients |
|-------------------------------------|
| Geriatric IPU Off-Site |
| Covid-Positive IPU Open |
| Staffing: 2 RNs 24/7 |
| 1 RN 8am-8pm daily |
| 1 Psych Tech Mon-Fri |

Source: The author
NEJM Catalyst (catalyst.nejm.org) © Massachusetts Medical Society

Consistent with the staffing plan outlined in Figure 2, our Covid-19–positive IPU officially opened on May 5, 2020, after three patients identified for psychiatric admission tested positive for Covid-19 via surveillance testing in our Comprehensive Psychiatric Emergency Program. As of late May,
we have admitted six patients to our Covid-19–positive IPU. As new Covid-19 cases occur in our community, we expect our Covid-19–positive IPU census to increase, with a maximum unit capacity of 11 patients.

The pandemic has presented a serious challenge to the operation of IPUs. Designed to encourage therapeutic social interactions, IPUs are a potential hot spot for infection. Here, we present our solution, which involved an interdisciplinary approach to creating a stand-alone Covid-19–positive IPU with integrated medical care. We are confident that this proactive and innovative approach to inpatient psychiatric care will allow the University of Rochester Medical Center to meet the needs of our patients, regardless of their coronavirus infection status, while also minimizing risk to our staff. And we hope our story will help support our colleagues as they troubleshoot similar challenges.

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