Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Editorial

Epidemic psychiatry: The opportunities and challenges of COVID-19

1. Introduction

Coronavirus disease 2019 (COVID-19) is a viral illness caused by the severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) that emerged out of Wuhan, China in late 2019. Since its emergence, COVID-19 has spread to over 100 countries, sickening about 170,000 people and killing about 6500 as of March 16th, 2020 [1]. COVID-19 is characterized by fevers, malaise, and dry cough which can progress to pneumonia. It is significantly more infectious and pathogenic than seasonal flu, with an estimated case fatality rate of 0.5–3% and approximately 5% of diagnosed patients requiring critical care [2,3]. Disease severity is associated with advanced age and comorbidities [4,5]. Regions heavily affected, including northern Italy and Wuhan, China, have faced significant challenges to health system capacity, particularly with respect to intensive care. At present, sustained community transmission of COVID-19 is occurring in many areas worldwide, including the United States. Public health efforts are oriented towards mitigation and limiting the rate of spread to prevent overextension of available healthcare resources such as ventilators [3].

The COVID-19 pandemic occurs in the broader context of increasing emerging infectious disease burden. After a decline in infectious disease morbidity and mortality in the early and mid-20th century due to antibiotics, vaccines, and modern sanitation, the threat of infectious diseases has resurfaced [6,7]. In addition to newly antibiotic-resistant organisms, new infections with epidemic or pandemic potential have been appearing steadily over the past several decades, including Ebola Virus Disease, HIV disease, avian influenza, severe acute respiratory syndrome, Zika virus, and many others. Fueled by the increasing speed and scope of global travel, the changing interface between humans and animals, climate change, and socioeconomic disparities, the threat of new epidemics and pandemics has been recognized as one of the great public health challenges of the 21st century [8,9].

While much of the early scholarly work on COVID-19 has focused on intensive care, emergency care, and primary care, prior emerging infectious disease epidemics have demonstrated that the role of mental health clinicians is key on multiple levels. This is particularly true of consultation-liaison psychiatrists, who possess expertise at working individually, institutionally, and systemically at the intersection of mental and physical health. Given the unprecedented scope of COVID-19, operationalizing the potential roles of psychiatrists in general, and CL psychiatrists in particular, is essential for a coordinated response. Here we set out potential key roles of CL psychiatrists in the context of COVID-19 and future epidemic/pandemic scenarios, and use our experience at a COVID-affected medical center to identify and problem-solve challenges in filling those roles.

2. Roles for the CL psychiatrist in the COVID-19 pandemic

We identify and comment on five general roles that CL psychiatrists and other mental health clinicians should be filling in epidemic/pandemic situations: patient care, advocacy, scholarship, staff support, and system support/public health. We discuss each below. As a note, many of the roles we discuss below are aspirational, and likely impossible for any individual service to take on. But in delineating the need, our community can respond collectively to fill these roles.

2.1. Patient care

In the epidemic/pandemic context, mental health clinicians need to tailor their patient care in several ways. Perhaps most acutely, for patients affected by COVID-19, our ability to control mental health comorbidities and manage behavioral agitation in conditions like delirium may be key for maximizing the number of patients able to receive high quality medical care. Patients in the ICU or hospital ward setting who are behaviorally dysregulated require disproportionately high workforce and resource investments. In epidemic scenarios, poorly managed psychotic or delirious patients may literally preclude stretched-thin staff from caring for other people in need. Aggressive management of behavioral dysregulation and high-quality care of underlying psychiatric disorders even in the setting of comorbid infection is key to improving both individual and communal outcomes. To minimize exposure and mitigate the loss of workforce to quarantines, psychiatric consultation can be done through video platforms as well as in person.

Beyond the risks of behavioral dysregulation within a thinly stretched system, clinicians should also be astute about the social and psychological impact of being infected with a potentially lethal epidemic illness. During the Ebola outbreak of 2018, patients under treatment were noted to have significant distress from the effects of isolation, the fear of dying (especially as other patients perished from the illness), and the sense of social rejection. In the Ebola treatment center in Beni, Democratic Republic of Congo, in 2018, patients were visited by psychologists multiple times daily to help mitigate distress [10]. This distress may be exacerbated by effects of quarantine, which may in itself may be associated with trauma-related disorders, stress, anger, and mood dysregulation [11]. Psychiatrists should work with the broader healthcare team to ensure infected and quarantined patients have access to appropriate mental health screening and treatment.

Pandemics/epidemics may cause collective fear and impose lifestyle changes for all patients, not only those directly impacted by infection. Many of our uninfected patients are struggling with concerns related to infection risk. Our medically morbid patients in the CL setting may be especially frightened because of their potentially greater risk for mortality and because of the specter of rationed care that emerges in

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epidemic/pandemic scenarios. During the Ebola epidemic, mental health professionals even beyond those caring for Ebola patients directly reported overwhelming MH need because of issues like grief and anxiety [12]. Of note, many of the patients we care for in the CL psychiatry setting, including patients with comorbid mental/physical illness, elderly patients, and patients with serious mental illness (SMI), are particularly vulnerable to changes in access to care that may occur during pandemics; psychiatrists in various settings should be aware and actively trying to mitigate lost access to care for high risk patients, while taking steps to avoid risking perpetuation of infection [13].

2.2. Advocacy

Even under normal circumstances, psychiatrists are accustomed to advocating for patients and conditions subject to significant stigma. CL psychiatrists must routinely navigate stigma against their patients or against psychiatric illness more broadly among patients, the lay public, and fellow non-psychiatrist clinicians. These skills are particularly needed in the epidemic/pandemic context. Historically, epidemics have resulted in high levels of blame and stigmatization of groups assigned responsibility [7]. Humanizing patients and utilizing sound, science-based information are means of preventing negative outcomes for patients stemming from fear and/or stigma.

Furthermore, patients with comorbid mental and physical illness may be the most vulnerable to the social and biological effects of the pandemic. Many of these patients are homeless and living in spaces conducive to rapid disease spread [15]. Others may not be able to maintain “social distance,” because of reliance on additional outside caretakers and/or because of living in institutional settings. Understanding the needs of our most vulnerable patients and helping to see that those needs are met in safe ways should be a key part of our work during pandemics.

Finally, psychiatrists may have something to offer more broadly in the battle against misinformation. Social media enables rapid dissemination of misinformation and there are global funding deficits for public health communication [14]. Patients encountered by CL psychiatrists, including individuals with cognitive or psychiatric disorders, may be especially vulnerable to misinformation. Disseminating correct information to our professional and personal communities in an effective, psychologically astute way is of the utmost importance.

2.3. Scholarship

It may not be self-evident to most clinicians that an infectious disease that does not primarily target the brain and nervous system may have psychiatric sequelae. Early research on emerging pathogens may exclude study of the acute and long-term psychiatric effects of the illness. Proactively instituting cross-institutional research-oriented data-sharing about the psychiatric dimensions of new pathogens is imperative for providing high quality care to acutely ill patients, survivors, and caregivers.

Many recent emerging infectious diseases, including Ebola, HIV/AIDS, and Zika, have had neuropsychiatric sequelae. Although no virus-mediated neuropsychiatric syndromes have yet been described from COVID-19, the absence of such syndromes has not been confirmed. Furthermore, there is evidence that the SARS-Cov-2 virus may target the CNS [16]. Identifying and understanding neuropsychiatric manifestations of novel pathogens is an important role for consulting psychiatrists, many of whom may recognize subtle symptoms or patterns overlooked by non-psychiatric clinicians. To that end, operationalized ways of collecting data on consultations provided to patients with emerging infections should be created and shared across institutions for rapid pattern identification and data consolidation.

Prior epidemics including HIV, SARS and Ebola have been associated with long term MH complications among families and surviving patients [12,17]. Such complications are often multifactorial and may include biological sequelae of the infection, trauma and grief, social stigma, and isolation. Studying the vulnerabilities of patients and caregivers following infection and creating evidence-based screening and treatment approaches is a mandate for psychiatrists.

2.4. Supporting our colleagues

Data from frontline healthcare workers in the early HIV epidemic, SARS, Ebola, and other epidemics demonstrates that working at the frontline of a pandemic/epidemic has significant psychiatric repercussions including burnout, anxiety and post-traumatic stress disorder [12,18]. The etiology of these disorders is multifactorial and includes fear of infection or death of self or family, sense of lack of control, sense of inability to help patients in situations of limited resources, moral injury in situations of rationing, distrust of institutional responses, and social stigma due to exposure.

In Wuhan, preliminary data on frontline healthcare providers showed high burdens of depressive and anxiety symptoms. Mental health services were established for health care providers at the frontline of caring for COVID-19 patients including online interventions, a phone hotline, and group activities. However, the team enacting these interventions noted that clinicians were often reluctant to participate in services identified as “mental health” interventions. Interviews with staff demonstrated that worry about infecting family and difficulties dealing with uncooperative patients are particularly challenging areas. In response to these concerns, mental health teams created areas for staff to isolate themselves from family. They also assisted staff in creating media messages to send to family to allay worry. Training was established for dealing with uncooperative patients. Other interventions included the presence of mental health clinicians on premises available to staff as needed [19].

Data from the H1N1 influenza epidemic in Japan in 2009 showed that institutional trust was correlated with motivation to work at the frontline. Experience from prior epidemics and from the Wuhan response suggests that psychiatrists can engender feelings of institutional trust by demonstrations of genuine support for our colleagues wellbeing and mental health [20]. Such work is contingent on availability, but also on willingness to move beyond the traditional treatment frame to engage with clinicians on the frontline in informal ways, and to move beyond the traditional mental health treatment paradigm to address social and health-related concerns like housing and risk to family.

2.5. Supporting the system

CL psychiatrists are accustomed to formulating clinical problems in terms of a variety of systems, levels of system organization, and interactions between systems, depending on which formulation will yield the most fruitful intervention. For example, we may focus in one case on metabolic derangements (organ systems), and in another on interpersonal conflicts (social systems) as of etiologic relevance and as targets for intervention. Pandemic infectious disease stresses systems across a variety of domains. Although CL psychiatry has largely focused on individual biological and psychological systems and on interpersonal interactions within medical care systems, the context of the pandemic/epidemic demands that we extend our skills to broader social systems as well. For instance, can psychiatrists assist in devising mass interventions aimed at encouraging the public to participate in prevention strategies like social distancing and voluntary quarantine?

In Wuhan, mental health providers participated in creating and providing publicly available informational materials about COVID-19. These materials included education on mental health in the setting of COVID disseminated to the public in conjunction with materials on prevention and control [21]. Furthermore, free online counseling has been made available to the Chinese public through institutions in 31 provinces [21]. Given the expertise of CL psychiatrists in issues related to health anxiety and health communication, there is a clear role for our

expertise in crafting such society-wide interventions.

On another note, medicolegal standards may change during epidemics. Such changes may have unique effects on patients with comorbid mental illness [22]. CL psychiatrists should contribute to analysis of complex ethical challenges, especially as they pertain to psychiatric issues, for example quarantining unwilling patients whose judgment is impaired by mental illness.

3. Challenges to providing consultation-liaison psychiatric care in the COVID-19 setting

The COVID-19 pandemic represents a significant challenge to our healthcare system and our society. Psychiatry, and particularly CL psychiatry, can play an important role in managing the individual, institutional, and societal difficulties arising from COVID-19 and future emerging infectious diseases—provided that barriers to our effective work can be successfully addressed. Below we elucidate a few challenges our service has identified at a COVID-affected hospital, and briefly discuss mitigation strategies we are implementing.

3.1. Exposure

Mental health services—particularly CL services in medical hospitals—may consist of only a few clinicians. An exposure event can knock an entire service into quarantine, effectively eliminating available mental health provision. In our institution, we are utilizing a multi-level exposure-prevention and mitigation strategy based on existing evidence to both limit individual exposure and protect the service.

On the individual level, we recommend ensuring that all staff have access to and training regarding appropriate use of personal protective equipment (PPE) [23]. We also suggest utilization of new technologies and models of care to limit individual exposure when consulting on potentially infectious patients. For example, telephonic or video consultations and/or indirect consultation to the consulting team are both being utilized to mitigate exposure [3]. Our service has found the use of video consultations using smartphones, tablets, or computers particularly helpful. Many patients have such devices. New medical video platforms offer relatively easy-to-use interfaces with quick connectivity that allow for face-to-face remote consultation. Given the deficit of PPE nationally, utilizing video consultation is also of benefit to the system and this is reflected in changes in billing and compliance rules to facilitate such consultative models during the epidemic. Frontline staff including nurses and primary team physicians can help patients “set up” video conferences with psychiatrists.

In areas where connectivity may preclude video consultation, other novel techniques are being developed. In Wuhan, mental health providers utilized a written modality of psychiatric consultation they titled “structured letter therapy” which entailed the exchange of structured written communication between therapists and patients under treatment for COVID-19. Although outcomes data for this intervention is not yet available, the authors suggest this was a means to serve a greater number of patients while mitigating exposure of the limited mental health workforce [24].

On the service-level, we recommend limiting all in-person service meetings and shifting to remote video-meeting. This includes eliminating large team rounds in favor of having individual trainees staff cases with individual attendings to prevent an inadvertent multiple-member exposure event. Finally, we suggest staggering staff so that certain staff are “on reserve” providing telephone support, supervision, and other services from home while other consultants are in-hospital. Staff on our service are encouraged to bring clothing changes or wear in-hospital scrubs to prevent contamination. Finally, consider limiting consultation on infectious COVID-19 patients to a small number of low-risk volunteer consultants to prevent unnecessary exposure of the entire service [23].

3.2. Morale

Psychiatrists and mental health clinicians are not immune to demoralization, burnout, and fear associated with being at the frontlines of a dangerous epidemic. We recommend daily update communications, including open discussion around concerns of infecting family members, protocols for arrival home and surface decontamination, and so forth. Our service is supporting high risk staff by moving them away from exposure sites. We also suggest system-wide monitoring of the supply of PPE, given potential shortages [3]. Along with exposure prevention and staggered staffing, services should utilize creative staffing arrangements to accommodate staffing challenges around child and eldercare and to ensure staff have adequate rest. Services should extend extra care to check in with trainees on the service to ensure they feel safe and supported in their roles.

3.3. Value added

Ensuring that our medical collaborators understand the roles of psychiatry in the context of epidemic response is a particular challenge given our own field only beginning to understand and define this role. Early in our hospital's epidemic response, psychiatrists were excluded from some of the mandates (for instance, the travel ban), suggesting a systemic lack of understanding about the role of psychiatrists in pandemic/epidemic response. Our approach to combating this lack of understanding is twofold: first, to work assiduously as a service to respond to the needs of our patients, institution, and community. Second, to document, operationalize, and share the multifaceted work that we find ourselves called to do at every stage of the pandemic/epidemic response. Sharing our contributions with our institutions and our discipline allows us to identify to ourselves and others how we can best be of use, and also to improve best practices across our entire community.

COVID-19 and other emerging infectious disease pandemic/epidemics represent a sobering reality of our increasingly connected world. Such events demand adaptation and response from our entire healthcare system. Psychiatrists—particularly psychiatrists working at the interface of medicine and mental health—will be challenged in unprecedented ways as frontline mental health providers. Epidemic CL psychiatry will demand creative new models of advocacy and care delivery, more engagement by CL psychiatry with staff support and social education interventions, and management of heretofore unanticipated risks. The roles we identify for psychiatrists are aspirational. No service, no matter how well staffed, can fill each of these roles. But working as a community of clinicians and researchers, we can strive to meet the needs on the individual, institutional, and societal level. These challenges are also opportunities: opportunities for our field to grow and evolve in its roles, opportunities to push scholarship in mental health in new directions, and, most importantly, opportunities to support our patients and communities in a moment of great need.

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Declaration of competing interest

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