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***Taking Social
Support Into
Account
Regarding the
Mental Health of
Health Care
Practitioners
Involved in
Treating Patients
With COVID-19***

polymathic understanding of the art and science of medicine to generate solutions is our greatest superpower as a subspecialty. Racism is poison. We can provide the antidote.

As black consultation-liaison psychiatrists, we are acutely aware of the structural racism and anti-black sentiment in this country. We have experienced racism not just in the community at large but in the academe as both trainees and now as attendings. As black parents we worry about whether our children will survive an afternoon jog or simply sleep through the night. We want this country and our institutions to do better for our sakes and that of future generations.

We urge you to educate yourselves about racism in all its forms, support your colleagues and trainees, advocate for communities of color, and hold institutions accountable for their role in the continued social and economic disenfranchisement of black Americans and other ethnic and racial minorities. If you have not brought up the current events related to racial injustice in your team rounds or sphere of influence in your clinical work, consider doing so. If you are a service chief, leader, administrator, or educator and you have not commented about these events to your staff already, consider doing so. Doing something sends a message to all, but especially people of color, that systemic racism is worth confronting and that you are creating a safe space for the conversation to happen.

If you believe that black lives matter, silence is not an option.

Conflicts of Interest: The authors have no conflict of interest.

Funding: There was no financial support for this letter.

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TO THE EDITOR: Health care practitioners tasked with treating COVID-19, an infectious disease of an unknown nature, face many stressors. These sources of stress include the pressure and difficulty of the work, as well as social stigma. Health care practitioners are likewise exercising vigilance day after day to prevent themselves from getting infected at work. The fear of infection, along with the pressures of work, cause great stress as they live their lives. What do health care staff in such situations need to do to protect their mental and physical health? While the WHO has already published its mental health and psychosocial considerations during the COVID-19 outbreak on the Web, there has been almost no discussion of the specific measures that health care institutions should take with regard to the mental health of health care practitioners. We would like to take this occasion to propose a perspective on this matter from research on social support.

“Social support is the perception and actuality that one is cared for and the provision of assistance or comfort to others, typically to help them cope with biological, psychological, and social stressors.”¹ This support can be

classified in various ways such as *informational*, *appraisal*, *instrumental*, and *emotional*.² When battling an unknown virus such as this one, having correct informational support is necessary above all else. At the same time, care must be taken with how the information is transmitted because it can easily become confusing. Health care institutions' infection-control teams should thus ideally have a system to transmit accurate information regularly. It is also important to appropriately evaluate the contribution of practitioners in the institutions as appraisal support. Instrumental support, meanwhile, refers to guaranteeing a system where practitioners can get adequate rest and not excessively strain themselves, and emotional support is when practitioners are shown adequate understanding and appreciation by those around them. These practices must be thoroughly followed at health care sites.

There is another view that categorizes social support by how it is given and received: *received* support and *perceived* support. Received support is as its name suggests, while perceived support refers to the supported individual feeling that they have received or could receive support, regardless of whether they have. Individual differences in perceived support, along with social skills, personality, and self-esteem,³ are known to emerge as a result of family relationships in childhood. For this reason, it is important (1) to conduct more active interventions on those who find it hard to maintain good interpersonal relationships at work and receive perceived support and (2) for hospitals to make their response as an organization clearer

in order for practitioners to acquire perceived support. The effect of received support on physical and mental health is not uniform, while perceived support is confirmed to have a positive effect.^{4,5}

For the sake of the physical and mental health of health care practitioners, it is important for health care sites and organizations to take social support into account and for health care institutions to adopt the perspective of social support in their day-to-day operations. Now is the time for health care institutions to build systems based on this perspective to maintain their practitioners' mental health. This is what must be done to prevent the breakdown of the health care system and overcome this unprecedented difficult situation.

Conflicts of Interest: K.Y. reports receiving grants and personal fees from Esai Co., Ltd., Japan; grants and personal fees from Otsuka Pharmaceutical Co., Ltd., Japan; personal fees from Meiji Seika Pharma Co., Ltd.; personal fees from Sumitomo Dainippon Pharma Co., Ltd.; personal fees from Pfizer Japan Inc.; personal fees from Mitsubishi Tanabe Pharma Corporation; personal fees from Shionogi & Co.; personal fees from Eli Lilly and Company; personal fees from EPS Holdings, Inc.; grants from Grant-in-Aid for Scientific Research (16K10260) outside the submitted work. K.K. reports receiving grants from Otsuka Pharmaceutical Co., Ltd., Japan; grants from Shionogi & Co., Ltd., Japan; grants from Taisho Pharmaceutical Co., Ltd., Japan outside the submitted work. N.W. reports receiving grants from Shionogi & Co., Ltd., Japan outside the submitted work. S.H. and S.K. have nothing to

disclose. Y.O. reports receiving grants from Taisho Pharmaceutical Co., Ltd., Japan; grants from Shionogi & Co., Ltd., Japan; personal fees from Mylan outside the submitted work. K.M. reports receiving grants from Taisho Pharmaceutical Co., Ltd., Japan; grants and personal fees from Otsuka Pharmaceutical; grants and personal fees from Shionogi & Co., Ltd., Japan; personal fees from Shire Japan; personal fees from Eli Lilly; personal fees from Meiji Holdings Co.; personal fees from MIYARISAN PHARMACEUTICAL CO.; grants and nonfinancial support from Grant-in-Aid for Scientific Research (18K0761); grants and nonfinancial support from Japanese Society for Probiotic Science outside the submitted work.

Funding: This manuscript has no funding source.

Acknowledgment: The authors would like to thank the Tokai University Hospital COVID-19 mental care team.

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***Clozapine
Toxicity in the
Setting of
COVID-19***



TO THE EDITOR: The COVID-19 pandemic presents a variety of unique challenges for psychiatric practice including decreased in-person visits, difficulties obtaining lab work, and interruptions in medication supplies. These circumstances are particularly salient for patients with serious mental illnesses who are treated with clozapine. Prescribing this drug requires close monitoring for serious side effects (agranulocytosis, myocarditis, aspiration pneumonia) and clozapine toxicity (seizures, ileus, delirium).¹ In addition, discontinuing clozapine upon admission to an intensive care unit introduces the risk of clozapine withdrawal which can result in severe psychosis, catatonia, and medical complications including delirium.² Clinicians caring for patients with COVID-19 on clozapine may thus encounter clinical syndromes that are in part due to

clozapine or require an adjustment of the clozapine dose. In the following paragraphs, we report 3 cases of elevated clozapine levels occurring in patients with COVID-19 who had been previously managed for several years on stable doses.

The first was a 76-year-old man with bipolar-type schizoaffective disorder complicated by recurrent catatonia. He had been stabilized for several years on clozapine 300 mg nightly (QHS) (trough level at this dose was 106 ng/mL) and monthly maintenance electroconvulsive therapy (ECT). He was admitted to the hospital with COVID-19 and catatonia 1 month after missing his last ECT treatment. A trough clozapine level from admission was 1360 ng/mL. Notably his hospital course was complicated by neutropenia with a nadir absolute neutrophil count (ANC) of 1100. Interpretation of this abnormality was complicated by the administration of an experimental COVID-19 medication (tocilizumab) that is associated with neutropenia. His ANC gradually rebounded to the 4000s, and his catatonia resolved with lorazepam and a reduction of clozapine to 200 mg QHS.

The second case was a 63-year-old woman with bipolar-type schizoaffective disorder stabilized for nearly a decade on citalopram 20 mg daily, olanzapine 20 mg QHS, and clozapine 50 mg in the morning and 350 mg QHS. She initially presented with nausea and confusion. She was found to have COVID-19, hyponatremia to 111, and an ileus. A clozapine level drawn at admission 4 hours before her normal nightly dose returned at 1060 ng/mL. No prior records were available for comparison. ANC at admission was elevated at 14,970. Her clozapine was held for 1 week without

adverse consequences, and the drug was gradually reintroduced when her bowel function returned to normal.

The third case involved a 53-year-old woman with schizophrenia who had been maintained for many years on clozapine 250 mg QHS and fluphenazine 5 mg in the morning and 10 mg QHS. Her last clozapine level from when she was taking 200 mg was 458 ng/mL. She initially presented with delirium, fever, and vomiting. At admission, she was noted to have COVID-19 and an elevated trough clozapine level of 2154 ng/mL. ANC was 2200 at admission and remained stable throughout her stay. Her clozapine dose was decreased to 50 mg QHS with a temporary increase in her home fluphenazine to 10 mg twice daily (BID). She tolerated a gradual return to her home dose with normalization in her mental status.

These 3 cases (granulocytopenia with catatonia, ileus, and delirium) serve as a reminder to clinicians that clozapine is associated with a wide range of medical complications and toxicities that complicate the management of COVID-19. At the start of the pandemic, an international consensus statement was drafted to provide guidance on how to continue treating patients with this life-saving medication.³ Recommendation 3 of these guidelines warns clinicians of possible clozapine toxicity in the setting of severe respiratory illnesses such as COVID-19. Recently it has been recognized that severe systemic inflammation can increase clozapine levels, in part due to cytokine-mediated inhibition of CYP1A2.⁴ Therapeutic drug monitoring and consideration of dose reduction is generally recommended under such conditions.³ Levels in the 200- to 450-ng/mL range are associated with