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## Disparities in the recovery from critical illness due to COVID-19

Long-standing structural inequalities have rendered our society susceptible to the devastation wrought by COVID-19—its virulence buoyed by stark racial, ethnic, and socioeconomic disparities—leaving in its wake a burgeoning population of survivors of critical illness disproportionately comprised of Black, Indigenous, and Latinx people. Few articles have addressed the potential for disparities in the looming mental health crisis facing COVID-19 survivors.

Survivors of the intensive care unit are at risk of neuropsychiatric and cognitive sequelae, referred to as post-intensive care syndrome (PICS), particularly patients who require prolonged mechanical ventilation and develop delirium-both of which are frequently encountered in severe COVID-19 infection. Approximately half of the survivors who require prolonged mechanical ventilation develop anxiety and depression, oneguarter develop post-traumatic stress disorder (PTSD), and half demonstrate neurocognitive impairments that, in some, might persist for 2 years following hospital discharge.<sup>1</sup>

Few studies have addressed the differential impact of PICS on minority communities, but existing data suggest minorities are at substantially greater risk for PICS. Among critically ill trauma patients, patients of Colour experience the highest rates of PTSD, and Black and Latinx patients demonstrate worse quality-of-life measures, more neurobehavioural complications, impaired community integration, and are less likely to receive treatment or be employed compared with white patients.<sup>2</sup>

Although data regarding PICS following infection with severe acute respiratory syndrome coronavirus 2 are not yet available, multiple factors suggest the psychological toll will disproportionately affect minorities. Racial and ethnic minorities disproportionately account for patients hospitalised with COVID-19. For example, an analysis from the Centers for Disease Control and Prevention compiling data across 14 states in the USA found Black patients accounted for one-third of patients hospitalised with COVID-19.<sup>3</sup>

Social factors unique to the pandemic might exacerbate disparities in PICS. The severe economic fallout, with known associations with mental health, has disproportionately affected minorities. An added source of psychological trauma unique to COVID-19 is the manner in which it affects entire communities, often through multigenerational households. Black and Latinx people in the USA are 2 to 3 times as likely as white people to know someone who has died from COVID-19.<sup>4</sup>

Moreover, racial and ethnic minorities have less access to mental health care, are more likely to receive poor-quality care when treated, and once in care, are less likely to receive comprehensive, evidence-based treatment.<sup>5</sup>

The looming mental health crisis among survivors of critical illness due to COVID-19 strengthens the case for expanding health insurance coverage. In the USA, one priority is bolstering Medicaid—the largest payer of mental health care services. With the Affordable Care Act, states that expanded Medicaid saw substantial increases in mental health care coverage. However, 14 states have yet to expand Medicaid, and many of them report the largest COVID-19related disparities.

Federal and state governments must continue to reduce barriers to key social service programmes, such as the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families. The Families First Coronavirus Response Act was an important first step, but legislation providing long-term support is still needed. As the protracted symptoms of PICS might hinder survivors from resuming employment, a history of moderate-to-severe COVID-19 infection should be included among disabilities exempted from SNAP work requirements and eligible for Medicare.

We must educate medical communities regarding sequelae of critical illness, especially among vulnerable populations. Observation that symptoms can present as early as 1 month after discharge reinforces the urgency of these measures. Patients and caregivers should be counselled regarding PICS symptoms before discharge. Hospitals must incorporate screening for PICS in follow-up programmes and operationalise multidisciplinary clinics that provide comprehensive access to mental health services. Clinics must provide culturally and language appropriate care, by expanding access to medical interpreters for clinicians with concomitant training in appropriate use of interpreter services. Health systems with a large proportion of non-English speaking patients might benefit from initiating communitybased training programs to expand interpreter services.

As health systems develop infrastructure for longitudinal followup of COVID-19 survivors, they should partner with community-based organizations to improve access to care. This partnership should include integration with community health centres to ensure streamlined referrals to subspecialists or multidisciplinary PICS clinics, with the option of telehealth services for medical and psychiatric care, and providing necessary technology to economically disadvantaged patients, including free or subsidised wireless internet, smartphones, and tablets.

The surge in critical illness is an opportunity to systematically study and optimise PICS care. We must generate open-access datasets that capture disparities in PICS to provide insights broadly applicable to the promotion of equity in acute and postacute critical care, and to democratise the research environment. Insurance companies and health-care systems should release racial and ethnic demographic data on COVID-19 infection and mortality to identify inequities and inform the steps implemented to mitigate them.

COVID-19 is not the first pandemic nor will it be the last. Recovery for patients will require multidisciplinary interventions, as will recovery for our health-care system. We must mobilise resources to address the inequities laid bare by this crisis and resolve to eradicate them.

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