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The COVID-19 Pandemic: Setting the Mental Health Research Agenda

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The COVID-19 pandemic has radically changed life in the United States and around the globe, posing multiple conjoint threats to public mental health. These threats include fear of the potential for infection by the virus itself; social isolation and alterations in health-related behaviors caused by mitigation measures aimed at reducing viral transmission; financial insecurity secondary to the economic consequences of the pandemic; and disruption of the health care system. Simply put, this is a disaster with consequences beyond the immediate health impact of the virus.

While the COVID-19 pandemic is in many ways unique, unfortunately, disasters and large-scale emergency events happen somewhere in the world each day, and typically there is more than one disaster in the United States nearly every week (1). Research from past large-scale traumas can inform our knowledge of mental health effects, risk and resilience factors, and effective services and interventions, enabling us to anticipate the likely mental health impacts of the current pandemic. This previous research also lays bare what we do not know and sets the research agenda for the National Institute of Mental Health's response to COVID-19.

Mental Health Impacts from Previous Disasters

Individuals exposed to a disaster experience a wide range of reactions. In a comprehensive literature review encompassing study samples from 102 different events comprising more than 60,000 individuals, Norris *et al.* (2) described the worry, fear, distress, somatic complaints, and sleep difficulty that are common for many people early after exposures to traumatic experiences. Of the disasters studied, relatively few samples (11%) showed minimal or highly transient impairment, half of the samples showed moderate impairment, and the rest showed clinically significant distress (21%) or severe symptoms indicative of a diagnosable psychological disorder (18%).

For most individuals exposed to disasters, the initial experience of mild and even significant symptoms tends to improve with time, but a significant minority (~10%) may have long-term or chronic experiences with mental illness (2). Individuals may be at higher risk of chronicity if they have few social supports, have a history of trauma or mental illness, were exposed directly to deaths or injuries, had severe acute reactions to the disaster, or are experiencing ongoing stressors (including occupational or financial strain) (2). Frontline health care workers treating the sick and dying may be at higher risk for experiencing psychiatric morbidity, at least acutely (3). As with routine stressful and traumatic events, there is no single

variable that determines individual outcomes; the additive total of risk and resilience factors determines how each person will respond (4).

Meeting an individual's immediate needs may help mitigate some long-term impacts of trauma on mental health. Practicing healthy coping strategies (noting accomplishments, setting reasonable expectations, talking, exercising) and avoiding substance abuse also tend to help with recovery. Not everyone recovers without intervention. For those who experience new or worsening illness, treatment can help (5). Indeed, promoting mental health recovery with evidence-based screening, assessment, treatment, and care coordination, while expensive, is likely to be cost-effective in the long term (6).

Research Gap: Measuring the Indirect Effects of Public Health Responses

Of particular concern with the COVID-19 pandemic are the potential effects of mitigation strategies on mental health. We need to understand the risks and benefits of public health policies and guidelines and support approaches to increase resilience to their adverse mental health effects. Again, past results help inform our expectations. The first severe acute respiratory syndrome outbreak from 2001 to 2003 was ultimately contained globally through widespread quarantine measures. During these efforts, longer durations of quarantine were associated with increased reports of distress as well as symptoms of posttraumatic stress and depression (7). Add to these effects the potential negative impact of the economic distress that has accompanied the widespread shutdowns during COVID-19, and the consequences for at-risk individuals may be particularly severe.

Here, a modern, data-focused research strategy has the potential to yield insights based on geographic and jurisdictional variance in recommended mitigation approaches and the public's adherence to them. Public and commercial health and administrative databases can be combined with ongoing cohort studies to understand how public health directives, compliance with mitigation measures, and economic sequelae interact with risk and protective factors to alter mental health trajectories. Such studies will not only inform our response to COVID-19 but also improve preparations for and responses to future pandemics.

Research Gap: Improving Access to Evidence-Based Care

The mental health care system in the United States is unable to meet the needs of people with mental illnesses in the best of

times (8). Delivering adequate care during disasters and other large-scale traumas is especially challenging. Consider the example of Hurricane Katrina: 8 months after the storm, fewer than 50% of people who developed mood or anxiety disorders received any care; of those who did, 60% had discontinued treatment. Undertreatment was associated with a number of demographic factors, including age, marital status, racial and ethnic minority status, insurance status, and income (9).

This is the crisis we face. The anticipated surge in demand for mental health care could quickly overwhelm capacity, particularly in specialties (such as child psychiatry) or locales (such as rural areas) where an existing shortage of providers is known. Gaps in and barriers to care for many vulnerable populations (including those with serious mental illness, in underresourced communities, in prison, or who are homeless) are known challenges with unknown solutions.

Research aimed at discovering solutions to these challenges needs to be prioritized. This research should be focused on leveraging the available mental health workforce; enabling practical, scalable, and sustainable mental health screening and triage; and providing interventions at scale. Interventions for the treatment of acute illness and prevention of chronicity need to be tested across the lifespan and along a continuum of intensity. Technological approaches, including digital and telehealth, will likely be crucial, but additional approaches must also be considered to ensure that interventions can reach those with limited access or familiarity. Research to understand and improve engagement and continuity of care, including approaches to facilitate (re)connection to care for persons with serious mental disorders who experience disruption in services, is needed. Finally, vulnerable populations, including those with serious mental illness or health disparities, are less likely to engage in mental health care, highlighting the need for innovative approaches.

A COVID-19 Research Agenda

This is the research agenda we are pursuing at the National Institute of Mental Health in response to the COVID-19 pandemic. We seek to understand the unique aspects of the COVID-19 pandemic, particularly with regard to interactions between risk and resilience factors and mitigation efforts. But even more crucially, we seek to understand how to best use the current treatments, imperfect as they are, in order to optimize a ready armamentarium that has proven helpful; research is now needed to inform the next steps that will make these treatments widely accessible across cultural, racial,

economic, and technological divides. In this way, the mental health research community, working in concert with clinicians and policymakers, can reduce the adverse impacts of the COVID-19 pandemic while developing the evidence base necessary to meet the demands of future disasters.

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