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PERSPECTIVE

A Mental Health Services Research Agenda in the Era of COVID-19: Steadfast Commitment to Addressing Evolving Challenges

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Abstract

Background: Decades of research that predate the COVID-19 pandemic demonstrate that most people with mental health needs are not receiving adequate care. The inequities between those who need care and those who receive adequate care are larger for racial and ethnic minority groups and people living in underserved communities. The pandemic is associated with an exacerbation of these inequities, resulting in increased morbidity and mortality for the most vulnerable populations.

Aims: This Perspective summarizes longstanding and evolving challenges to the provision of high quality care for people with mental illness, describes the National Institute of Mental Health's (NIMH) commitment to addressing those challenges, and embeds salient research priorities most germane to the health policy readership of this journal.

Methods: Example funding announcements and extant funding priorities are highlighted to demonstrate NIMH's commitment to health services research during the pandemic. The collaborative care model is presented as an evidence-supported service delivery model that could be delivered via telehealth. Recent studies that compare the utilization of routine telehealth services during the pandemic, when compared to in-person services pre-pandemic, are summarized.

Results: In FY2020, NIMH invested $171,194,275 in health services research. Over the past two years, NIMH led or participated on dozens of funding announcements that call for mental health services research to help improve the provision of care for people with mental illness. Service delivery models like collaborative care can offer effective intervention via telehealth. The practice community can deliver routine services via telehealth at volumes similar to pre-pandemic in-person levels. However, wide variation in telehealth utilization exists, with inequities associated with racial and ethnic groups and underserved rural locations. A limitation is that clinical outcomes are not routinely available from administrative datasets.

Discussion: There continues to be an urgent need for health policy research and collaboration with the health policy community as part of the research enterprise.

Implications for Health Care Provision and Use: NIMH encourages and often requires strong research practice partnerships to help ensure findings will be of value to end users and make their way into the practice setting. There is a need to study pandemic related changes in financing, delivery, receipt, and outcomes of mental health care.

Implications for Health Policies: Despite robust evidence, clinical practice guideline recommendations, and established financing mechanisms, uptake of service delivery models that can be delivered in part or in full via telehealth (e.g., the collaborative care model) is poor.

Implications for Further Research: In the era of COVID-19, the charge to the mental health services research community is urgent: (i) develop strategies to better implement, scale, and sustain existing evidence-supported treatments and services and (ii) develop, test, and evaluate new solutions to improve access, continuity, quality, equity, and value of care.

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Introduction

The National Institute of Mental Health (NIMH) envisions a world in which mental illnesses are prevented and cured. To realize this vision, high value prevention, treatment, and services interventions need to be not only effective, but affordable, readily accessible, and equitably offered and delivered to those who could benefit from them. This Perspective summarizes longstanding and evolving challenges to the provision of high quality care for people with mental illness, describes NIMH's commitment to addressing those challenges, and embeds salient research priorities most germane to the health policy readership of this journal.

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Evolving Challenges in the Era of COVID-19

Decades of research that predates the pandemic[1-3] demonstrates that most people with mental health needs are not receiving adequate care. Among the minority of patients with mental health needs who do find their way into care, most are not seen by a specialist.[3] This gap between those who need care and those who receive adequate care is larger for racial and ethnic minority groups.[4] And this gap is widening.[4]

COVID-19 has and continues to wreak havoc on the lives of millions worldwide. Authors from the National Center for Health Statistics report that ''[m]ortality [in the United States] due to COVID-19 had, by far, the single greatest effect on the decline in life expectancy at birth between 2019 and 2020, overall, among men and women, and for the three race and Hispanic-origin groups [that were measured].[5]'' More alarming is that the disparities in racial and ethnic mortality increased during this period.[5] Findings from other studies show increased trends in mental health symptoms and suicide risk,[6-8] increased claims associated with mental health and crisis visits,[9] and continued or greater disparities for those who are most vulnerable, to include significant associations of increased morbidity and mortality among people with schizophrenia,[10] people with serious mental illness more broadly,[11] and people with mood disorders.[12] People with serious mental illness are already known to die at 2.2 times the rate of the general population and 10 years earlier than their age- and gender-matched peers,[13] with risk of premature mortality being higher in certain subpopulations. For example, the estimated life lost for individuals with schizophrenia is 28.5 years in the United States.[14] Young people with incident psychosis are associated with mortality at least 24 times higher in the year following their diagnosis than age-matched individuals in the general population.[15] These populations are also already known to have grossly underserved medical and psychiatric needs.[15,16]

Despite the unprecedented scope and impact of the COVID-19 pandemic, pre-pandemic research demonstrated that service delivery interventions like the collaborative care model and other interventions with care managers are effective and cost-effective for mental disorders when delivered fully or partially via telehealth.[17-21] That is, these interventions can be delivered now with reasonable expectation that people in need can benefit from them.

The collaborative care model in particular is a specific and robustly tested service delivery intervention that puts into practice these components of effective care integration: (i) population-based care through routine screening for indicated conditions and real-time use of a disease registry, (ii) measurement-based care and treatment to target principles, (iii) care management, and (iv) dedicated psychiatric consultation.[22,23] The collaborative care model is backed by scores of positive clinical trials, evidence of reach and effectiveness when implemented in practice settings,[24,25] and is supported by a ''strong for'' and ''weak for'' recommendation in the Department of Veterans Affairs and Department of Defense clinical practice guidelines for depression[26] and post-traumatic stress disorder.[27] The collaborative care model is one of a few models known to be associated with reductions in health disparities.[28,29] Additionally, the Centers for Medicare and Medicaid Services and a growing number of public and commercial payers[30,31] now reimburse for services furnished via the collaborative care model.

Uptake of the collaborative care model is low,[32,33] even with robust evidence and the availability of financing mechanisms supporting its implementation. However, uptake is increasing.[33] While the full model may be challenging to implement in practice, routine screening for depression is a simple component of collaborative care that has been independently and repeatedly recommended by the United States Preventive Services Task Force (USPSTF[34]). The Affordable Care Act specifies that commercial and individual or family plans must, at a minimum, provide coverage and not impose cost sharing for any evidence-based preventive services, like depression screening, that receive a grade of A or B recommendation from the USPSTF.[35] These requirements help incentivize the practice community to provide such services. Unfortunately, rates of screening are low in practice,[36,37] and rates of routine screening may have declined as a result of the pandemic.[38] At minimum, these findings suggest the need to study the adequacy and interpretability of existing financing mechanisms as policy levers for implementation of best practices.

NIMH's Commitment to Health Services Research

NIMH is committed to health services research. Estimates generated by the thesaurus-based text mining process through the Research, Condition, and Disease Categorization (RCDC) system[39,40] demonstrate that NIMH's investments in health services research increased from $105,793,762 in FY2016 to $149,088,622 in FY2019 and $171,194,275 in FY2020,[41] with FY2019 and FY2020 being the most current years with reportable data at the institute level. RCDC category definitions are a list of scientific terms, selected from a centralized thesaurus, that are highly relevant to a specific condition, disease, or research area. The RCDC thesaurus is annually curated for new scientific content and used to index that fiscal year's set of awards. For Health Services, parameters on what types of projects should be captured by the category definition is derived from the US CODE: 42 USC § 284d which includes research that seeks to explore issues about the organization, delivery, access, cost/financing, management, outcomes, effectiveness, utilization, or quality of health services. Each RCDC category's funded project listing, including clinical trial and non-trial research, is available for download.[41]

In FY2016, RCDC-categorized Health Services research accounted for approximately 6.98% of the final NIMH budget.[42] In FY2019, the year before the pandemic, health services research accounted for approximately 7.97% of the final NIMH budget.[43] And in FY2020, the first year of the

pandemic, health services research accounted for approximately 8.38% of the final NIMH budget.[44]

While RCDC categorizes research *projects*, mental health services research *priorities* are communicated through the NIMH Strategic Plan for Research,[45] with Goal #4 (of 4 goals) principally focused on mental health services research. Funding opportunity announcements communicate research priorities too and also offer a path for researchers to seek funding for their ideas. NIMH continues to issue funding announcements that invite clinical trial[46,47] and non-clinical trial[48,49] research projects that address the full range of NIMH's services research priorities.

In addition, and during the past two years, NIMH issued a number of funding announcements that call for mental health services research with more focused attention on delivery modalities like telehealth in the emergency department;[50] in more focused settings like low resourced settings for underserved populations;[51,52] with more focused attention to health disparity reduction with Black youth and adolescents[53,54] and youth from underserved populations to reduce suicide and suicide risk;[55,56] and in more focused populations, such as those affected by the opioid epidemic to include people with co-occurring opioid use disorder and mental health conditions and/or suicide risk.[57-59] To address supply side challenges caused by workforce shortages and turnover, NIMH invites research to expand capacity, improve retention, and develop a well-trained workforce that can equitably delivery high value mental health care.[45,49] Finally, NIMH recognizes the importance of funding individual research projects but also recognizes the unique value and opportunities for synergies that come with research centers[60-62] and practice-based research networks premised on learning healthcare[63,64] and with direct relevance to telehealth transitions due to the pandemic.[65]

Specific to COVID-19, NIMH led or participated on 26 (as of 7/24/2021) funding announcements or notices.[66] As seen by the priorities in these announcements,[66] NIMH is committed to supporting research that reduces disparities and advances equity in mental health interventions, services, and outcomes. This research cannot be optimally impactful without active collaboration with the health policy community.

The aforementioned COVID-19 related announcements fall into three categories. The first category is investment to help ongoing studies that were delayed or otherwise negatively impacted by the pandemic, with funds prioritized to help trainees and other investigators whose grants are ending without additional funding.[67] The second category is investment in research to improve the provision of services related to coronavirus identification and prevention (e.g., Rapid Acceleration of Diagnostics for Underserved Populations [RADx-UP] initiative[68]). The third category is investment in research to understand the impact of COVID-19 and to improve the mental health response to the unprecedented pandemic. Examples of such research can include the impact of school disruptions on children's mental health[69] as well as broader social, behavioral, and economic impacts,[70] to include research on digital healthcare interventions. Here, projects studying pandemic related changes in financing, delivery, receipt, and outcomes of mental health care are seen as higher priorities relative to lower priority projects that merely describe the epidemiology of mental disorders and symptoms related to the COVID-19 pandemic.[71] These funding mechanisms require crucial collaboration with end users and stakeholders, such as policy and decision makers, to address a high priority mental health services research agenda.

Policy relevant research cannot be conducted in a vacuum. Indeed, and to accelerate the uptake of findings from services research, NIMH strongly encourages and often requires partnerships among scientists, those who directly benefit from evidence-based approaches (e.g., service users, caregivers), and public and private stakeholders who oversee and make decisions about the provision and financing of care. There is also a science to developing these partnerships and effectively disseminating research findings to decision makers.[72-74] Effective partnerships among these stakeholders are crucial for identifying salient services research questions, developing realistic interventions, and testing adoptable, scalable, and sustainable approaches that promote continuously improving mental health care.[45]

Urgency for More Mental Health Policy Research

It is encouraging that the research, practice, and policy[75,76] communities acted swiftly in response to the abrupt suspension of many in-person clinic services. The hard pivots to telehealth and use of other digital health technologies helped mitigate the loss of mental health services to those in need. Recent findings suggest that some settings maintained or nearly maintained visit counts via telehealth (to include telephone only visits) when compared to a similar pre-pandemic period. For example, in a sample of California Federally Qualified Health Centers, which provide comprehensive primary care services (to include behavioral health services) to low-income beneficiaries, the shift to telehealth resulted in only a minimal decline in visit volume for primary care visits and stable volume for behavioral health visits.[77] Other findings from a commercially insured population suggest that growth in telemedicine use offset roughly two-thirds of the decline in in-person visit volume during the COVID-19 pandemic.[78]

Significant variation exists, however. Primary care practices under alternative payment models (i.e., not fee for service) were better able to make the transition to telehealth.[79] This transition was also associated with disparities in access to telehealth services among underserved racial and ethnic groups and people in underserved rural locations.[78,80,81] One major limitation to these data is the absence of clinical outcomes associated with metrics that only count the services delivered via telehealth. This is a limitation of many studies, including studies conducted before the pandemic, that use claims and/or administrative datasets. Data-capture techniques that seamlessly integrate insurance claims with clinical outcomes

(e.g., from electronic health records or other sources where clinical outcome data are available) will better equip health economists, health policy experts, and other end-users with rigorous research findings to inform public health policy and practice recommendations.[82]

In the era of COVID-19, the charge to the mental health services research community is even more urgent: 1) develop strategies to better implement, scale, and sustain existing evidence-supported treatments and services and 2) develop, test, and evaluate new solutions to improve access, continuity, quality, equity, and value of care. This charge is consistent with existing priorities outlined in the NIMH Strategic Plan for Research and a paper published at the height of the pandemic that was authored by the NIMH director.[45,83] For the health policy audience of this journal, research strategies and solutions will need to target challenges with healthcare policy and financing (to include policies about how to finance digital health interventions[84]) at the local, state, health system, and federal levels.

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