

Examples of COVID-19 Impacts on the Research Enterprise

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The COVID-19 pandemic has resulted in major disruptions to the U.S. research enterprise, especially for trainees and early-career investigators, women, and underrepresented minorities. The below resources and recorded conversations with leaders in medical research highlight some of the impacts of COVID-19 to the research community and the expected delays in progress towards new treatments, diagnostics, preventions, and cures that could result without additional support. Restoring our nation's research enterprise is not only critical to preparing for future health threats but would also help build back and further strengthen the medical research workforce and have a positive impact on the economy.

Impacts to Women, Underrepresented Minorities, and Early-Career Researchers

- A March 2021 National Academies of Science, Engineering, and Medicine report, [Investigating the Potential Impact of COVID-19 on the Careers of Women in Academic Science, Engineering, and Medicine](#), identified the disproportionate impact of the pandemic on the research careers of women in academic science, technology, engineering, math, and medicine (STEMM). As noted in the press release, “Emerging evidence suggests that the disruptions caused by the pandemic endanger the engagement and retention of women in these fields — and may roll back some of the achievement gains made by women to date.”
- On March 26, 2021, NIH published [preliminary results](#) from [two online surveys](#) fielded in October 2020 to objectively document COVID-19's impact on NIH-funded extramural research. The early results document a disproportionate effect on early-career investigators in three main areas of impact: an anticipated negative impact on career trajectory; negative mental health impacts from several factors; and decreased research productivity due to lack of access to research facilities and/or additional caregiver duties.
- In the January 2021 report [Voices from the Field: The Impact of COVID-19 on Early Career Scholars and Doctoral Students](#), the American Educational Research Association and the Spencer Foundation explored how early career scholars and doctoral students in education research were being affected by the pandemic. The report sheds light on the disruptions, delays, and adaptations to research, such as: overhauls of projects that were underway or that necessitated in-person fieldwork, uncertainty about whether projects could continue and whether scholars would be able to complete their dissertations, and the need to shift to other research areas or other forms of work outside of research.
- A [February 2021 Science article](#) described how the COVID-19 pandemic has exacerbated disparities faced by female scientists and created additional challenges for women, especially those with children, struggling to maintain their research productivity.

Impacts to Patients and Research Productivity

- A [recent study](#) estimated that clinical trial activations fell to only 57% of what would have been expected pre-pandemic. Separately, weekly accrual in NCI-funded clinical trials were cut in half from approximately 300 participants/week before the pandemic to less than 150/week after COVID-19 hit. While enrollment has started to recover, delays mean that some trials will take much longer to complete; researchers participating in clinical research will take longer to finish training; some trials will close because they will not enroll enough participants; and drugs being tested will take longer to be approved by the FDA.
- Leaders in academic medicine highlighted the urgency of rebuilding research [in an op-ed](#), noting that at Johns Hopkins University, enrollment in clinical trials dropped by more than 70 percent between March and August 2020. At the University of Pennsylvania's Abramson Cancer Center, nearly 90 percent of cancer clinical trials suspended enrollment in the spring of 2020. Trials that continued in April and May had less than a third of the patients originally participating. As teams have learned how to safely resume in-person clinical research activities, enrollments for trials have moved toward pre-pandemic levels but are still not fully recovered at many institutions.
- [One Voice Against Cancer](#) provided an overview of COVID-19 disruptions to researchers and patients on clinical trials. In some cases, individual trial sites had to identify ways to safely facilitate continued care for already enrolled patients; new enrollments froze; and new trials were delayed indefinitely, with

the most immediate effects felt by the patients taking part in these trials. Since clinical trials and the broader drug development process can take years to realize, the full effect of this disruption on therapeutic innovation in cancer care could be felt for years to come without measures to mitigate the disruption.

- An [August 2020 report](#) and corresponding [January 2021 addendum](#) from the Council on Government Relations provided insights on COVID-19-related disruptions, estimating research output losses between 20 and 40% and serious financial impacts to institutions and the entire U.S. research enterprise between March 2020 and February 2021. The report presented a model for estimating research output loss and financial impact and describes the challenges of doing research under the new “Pandemic Normal.”
- In February 2021, Research!America collected more than 120 examples, quotes, and other documentation that brings into focus the corrosive effects of COVID-19 to our nation’s basic and clinical research ecosystem and researchers, including loss of productivity, stalled experiments, and disruptions in funding. [This compilation](#), provided by the organization’s alliance members, conveys the real-world consequences of the pandemic on U.S. research assets.
- In September 2020, the Association for Research in Vision and Ophthalmology held a [conversation with 22 early-stage vision scientists](#) about the impact of COVID-19 laboratory closures on their research, including challenges associated with patient engagement in clinical trials, animal colonies and cell cultures, collaborations with colleagues, training grants, and the overall career pathway.

The Need for Emergency Supplemental Funding

- Members of the House of Representatives and U.S. Senate reintroduced [H.R. 869 / S. 289](#), the Research Investment to Spark the Economy (RISE) Act in February 2021. This bill aims to mitigate the COVID-19 impacts to the research enterprise by authorizing \$25 billion to federal research agencies, including \$10 billion to the NIH, to support the completion of research projects initiated before the COVID-19 pandemic and maintain a robust research workforce.
 - The RISE Act is led by Sens. Markey (D-Mass.), Tillis (R-N.C.), Peters (D-Mich.), and Collins (R-Maine) in the Senate, and Reps. DeGette (D-Colo.), Upton (R-Mich.), Eshoo (D-Calif.), Johnson (D-Texas), and Gonzalez (R-Ohio) in the House.
 - Sponsors from the House of Representatives [sent a letter to the Biden administration](#) urging support for the RISE Act.
 - The AAMC joins Google, the U.S. Chamber of Commerce, and [more than 300 organizations in the research stakeholder community](#) including patient groups in endorsing this legislation.
- The AAMC joined more than 200 organizations in [a March 24, 2021 letter](#) asking President Biden to champion the funding outlined in the RISE Act, which would provide \$25 billion to help restore the nation’s research capacity to its pre-pandemic strength, prevent setbacks against the formidable challenges our nation faces, and further the goal of a robust, diverse, and inclusive STEM workforce.
- The AAMC has also joined with other higher education groups on a series of letters, most [recently delivered on January 26, 2021](#), asking Congressional leadership to provide supplemental funding for federal science agencies to mitigate the disruptions the pandemic has imposed on the nation’s scientists and the research operations that underpin the U.S. scientific enterprise.

Virtual Briefings Detail Pandemic’s Research Impacts

- The AAMC, Association of Public and Land-Grant Universities, the Association of American Universities, and the American Council on Education held a July 2020 briefing for Congressional staff titled, [Research Disrupted: Protecting Federal Research Investments and the U.S. Research Workforce from COVID-19 Impacts](#). During the briefing, speakers from Washington University in St. Louis and the University of Washington gave an overview of recommendations for emergency supplemental relief, as well as specific examples of disruptions to NIH-supported research at their institutions.
- The Ad Hoc Group for Medical Research and Coalition for Health Funding continue to host [a series of virtual briefings](#) featuring discussions with directors of NIH’s institutes and centers about how pre-pandemic research and ongoing work can inform our response to the virus, as well as the impact the pandemic is having on existing research across the agency’s broad portfolio.