Seminar on Developing a Research Agenda on the Medium- and Long-Term Social Impacts of the COVID-19 Pandemic

National Academies of Sciences, Engineering, and Medicine
Committee on Population
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Web Conference

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This meeting summary was prepared by Rose Li and Associates, Inc., under contract to the National Institute on Aging (NIA). The views expressed in this document reflect both individual and collective opinions of the meeting participants and not necessarily those of NIA. Review of earlier versions of this meeting summary by the following individuals is gratefully acknowledged: Shadya Sanders, Dana Carluccio, Andrea Gilmore-Bykovskyi, Kristen Harknett, Amy Hsin, Rose Maria Li, John Phillips, Leah Ruppanner, Hannes Schwandt, Nancy Tuveson.
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Introduction

On May 20, 2021, the Committee on Population (CPOP) of the National Academies of Sciences, Engineering, and Medicine convened an expert panel to address the medium- and long-term social impacts of the COVID-19 pandemic. Six presenting researchers provided insight on some of the known impacts of COVID-19 as well as potential long-term impacts that may be relevant to investigate.

Collectively, the presenters expressed a need for additional investigations into specific demographic groups, specifically according to gender, parental status, race, and socioeconomic status. Presenters also emphasized broadening consideration of impacts on public schooling, childcare, caregiving, labor force participation, housing, and financial stability. To better understand these impacts, presenters encouraged the use of ongoing data collection, longitudinal studies, and updates to current research scales to better capture timely and relevant outcomes that may have previously been unaddressed.

The available data highlight several key findings, including:

- The impact of public education as a social safety net that provides childcare, nutritional stability, psychological care, mental wellbeing, socialization, and student enrichment.
- Long-term impacts of delayed higher education graduation on financial stability, family formation, and labor force experiences across multiple age cohorts.
- Mixed outcomes for service workers hailed as heroes, with the potential for public pressure to improve working conditions in the short term and the continued limitation of these improvements in scope and geographic reach.
- The potential for improved outcomes for working parents, based on broadened acceptance of remote work and federal support for childcare.
- The continued disparity in unpaid labor among women, and the potential long-term consequences of a significant decrease of women in the labor force.
- The multiple compounding impacts of caregiving for older adults, particularly for those who are also caring for children under 18.
- A need for updated assessments that can accurately represent traditionally underrepresented subgroups and related health disparities.
- A need for research that investigates beyond the individual level by considering families, communities, networks, or individuals’ perceptions of networks.

Several of the factors identified by the presenters have been exacerbated by the pandemic and have come into broader public view. The pressures placed on working parents have been highlighted, for example, particularly because of a lack of childcare, which inhibits economic activity and reduces the labor force.
Presentations

Discussion with the National Institute on Aging (NIA)

*John Phillips, PhD, Division of Behavioral and Social Research, National Institute on Aging*

Dr. Phillips provided background information on NIA's accomplishments and future direction supporting research and research infrastructure to facilitate social and behavioral research on the pandemic. NIA has been involved with the cross-NIH COVID-19 Social, Behavioral, and Economic Research Initiative (SBE) (including the National Institute of Mental Health, National Institute on Minority Health and Health Disparities, Office of Behavioral and Social Sciences Research, and others), which supports research that moves beyond the development of vaccines to investigate the social, behavioral, and economic dimensions of COVID-19 mitigation practices.

NIH SBE research spans five major areas: (1) effects of various mitigation strategies on reducing COVID-19 transmission and the role of mitigation adherence, (2) social and economic impacts of mitigation efforts, (3) downstream effects of mitigation efforts on mental health, mental health disorders, and substance use disorders, (4) the effects of the pandemic and mitigation efforts on access to health care and health outcomes, and (5) the effects of telehealth and other digital interventions to compensate for a lack of in-person services. COVID-vulnerable populations will be a focus of SBE evaluations going forward, particularly in areas where disparities existed, were amplified, or in rare cases were mitigated by the pandemic.

To rapidly initiate research and data development projects in these areas, NIA supplemented existing longitudinal studies that provided pre-pandemic data. Dr. Phillips described the Health and Retirement Study (HRS) and Understanding America Study (UAS) as two examples of longitudinal studies that were supplemented by the NIA to investigate the relationship between COVID-19 infections and the development of Alzheimer's disease and related dementias (ADRD), as well as vaccination attitudes, foregone health care, the receipt of public benefits, self-administered oral antibody tests, protective behaviors, mental health, substance abuse, employment status, and more. NIA provided additional funding to ensure that data harmonization could be achieved and shared through NIH’s Disaster Research Response (DR2) repository, which allows researchers to see available resources and thus produce comparable measures across survey instruments.

NIA also has made steps toward building a SBE COVID-19 consortium that leverages existing data sets with wide population coverage to examine the efficacy of COVID-19 mitigation efforts and attendant influences, as well as the impact of these mitigation efforts on subsequent economic disruption and on multiple health-related outcomes, with particular attention to underserved and vulnerable populations. In conjunction with a planned consortium coordinating center, the consortium will produce new SBE research, develop and share new data sources, and share results with the public.

To facilitate ongoing COVID-19 research and SBE impacts, NIA continues to improve and coalesce administrative data sources, such as Medicare data. To help NIA determine which types of investments will be made for medium- and long-term research opportunities, Dr. Phillips noted three factors for researchers to consider. First, NIA supports research that
investigates how mitigation practices and the pandemic overall have influenced health and welfare. Second, the investments made today in ongoing longitudinal studies can support research on the natural experiment presented by the pandemic that will have long-lasting impacts. Early findings on short-term impacts highlight disruptions in education, labor, reductions in health services, and a reluctance to taking mitigating actions that are affecting health in the short-term. NIA is interested in identifying areas where data are needed to accurately identify mechanisms driving disparities in the medium- and long-term wake of the COVID-19 pandemic.

**Medium- and Long-Term Impacts of Disruptions to the Educational Process**

*Amy Hsin, PhD, Queens College, City University of New York*

COVID-19 has had a significant impact on all students, including those between kindergarten and high school (K-12) and those in higher education. By March 2020, all K-12 schools had closed in the United States, although evidence on the effect of these school closures on slowing the spread of COVID-19 was mixed. By March 2021, nearly 60 percent of schools offered some portion of in-person education, such as a shortened school day or classes only on certain days of the week. Dr. Hsin described short- and long-term policies designed to assist students and families impacted by the pandemic and its mitigation efforts.

**Disparities in In-Person Education**

Large racial disparities have appeared among students receiving in-person instruction as school districts have opened. White students represent the largest population enrolled in in-person instruction, followed by Black and Hispanic students, with Asian American students participating the least in in-person enrollment. The lack of consistent, full-time, in-person instruction negatively impacts working families and students’ academic achievement. Although data are limited, English Language Arts (ELA) exams have shown a 0.3 standard deviation decrease in scores for elementary students, with 50 percent greater declines for Black students compared to white students. The pandemic intersected with existing racism, particularly for Asian American students, which contributed to learning losses and an erosion of mental health.

Similar impacts are visible for students in higher education. Recessions generally have counter-cyclical effects on college enrollment; during economic downturns, such as the Great Recession, students invest in their education until the economy has recovered. However, the COVID-19 economic collapse largely impacted industries that employ lower-wage workers and immigrant communities, often causing college-age youth to leave educational institutions to help support their families. Resulting delays in graduation, which are 55 percent more likely among lower-income students, are associated with lower overall earnings and a general reduction in human capital accumulation over the lifecourse. Moreover, during COVID-19, enrollment has increased only in private, for-profit colleges, which is a disturbing trend due to the predatory nature of their recruiting tactics.
**Intervention Opportunities**

Schools and education systems are a social safety net for communities; they provide, among other things, food security and psychological services and serve as socializing institutions. School closures contribute to losses in learning and a loss in critical services. Interventions to alleviate these losses need to be directed at all aspects of the impact. Short-term interventions will require equitable instructional policies, which would include closing the digital divide to enable remote learning and providing safe instructional settings for students receiving in-person instruction.

Medium- and long-term interventions should include methods aimed at recovering lost instruction time and re-engaging with students who may have dropped out of secondary and postsecondary education. Policymakers could redesign instruction to allow more flexibility that can accommodate students who are working or have dropped out of school. Lost educational time could be recovered through the expansion of summer programs, after-school enrichment programs, or the extension of the school year. Additional data will be needed to understand the impacts of remote instruction, including whether improper remote instruction, a lack of in-person instruction, or undesired remote instruction led to greater inequalities for vulnerable populations.

**Discussion**

**Schools as a Social Safety Net**

School closures during the pandemic have highlighted the fact that schools have increasingly been asked to act as social service hubs that alleviate the impact of poverty, even as their budgets are cut. Community schools that are sufficiently resourced and funded to provide social services could extend their work to deliver neighborhood health interventions, similarly to community health centers. This approach to service delivery is a counterpoint to the public conversation on policing, which is also expected to provide a large number of social services.

**Scientific Representation in School Boards**

Many public school boards do not have input from scientists when making public health-related decisions, which can lead to uninformed decisions and a reliance on the most outspoken parents. A method to integrate scientific knowledge into school boards should be considered when developing community schools.

**Racial Disparities in In-Person Schooling**

Additional data are needed to clarify why Asian Americans have the lowest attendance at in-person schooling. Early awareness of the seriousness of the pandemic and the rise in anti-Asian hate crimes and violence may both play a role. The spatial distribution of racial minorities should also be considered when assessing rates of in-person education: students of color are less likely to reside in districts that offer in-person instruction. However, racial disparities persist even within New York City, a racially and ethnically diverse city that has re-opened schools.
**Impact of Remote Education**

Though in-person education is currently viewed as the gold standard, workshop participants were not aware of existing research on the kind of large-scale involuntary remote education that emerged during the pandemic. However, emerging data from Dutch researchers suggest that students’ performance decreased during the switch to remote learning—and each student in this case was fully supplied with a computer and high-speed internet, which is not the case in the broader population.

Although some research shows that initial school closures have helped stop the spread of COVID-19, long-term closures may have led to increasing trade-offs as schools established mitigation efforts and school closures diverted children to other forms of public childcare instead of to home.

**Medium- and Long-Term Impacts of Graduating in a Recession: Implications for Understanding the Consequences of Pandemic-Related Disruptions**

*Hannes Schwandt, PhD, Northwestern University*

Emerging evidence shows persistent impacts on individuals who transition from an educational institution into the labor market during an economic crisis. While cross-sectional and longitudinal data can generate complex analyses, data have shown that a recession can impact an individual even 10 to 15 years after graduation. By implementing a double-weighting strategy that incorporates both state-level education rates and migration data from the Census and the Current Population Survey, Schwandt and his coauthor Till von Wacheter (UCLA) generate an average graduation year unemployment rate and explore how this rate is related to finances, family formation, and long-term negative health effects. However, the nature of the COVID-19 recession has multiple unique elements that make it difficult to predict impact over time.

**General Trends in Recession Graduates’ Lifecourse**

Long-term cohort data show that recession graduates begin their careers at lower-quality employers and must switch jobs frequently to catch up and compensate for the negative impacts of the recession. Findings suggest that students entering the labor force during a recession experience decreased initial earnings (up to 12 percent), with a 1 percent negative effect that persists through age 52. Recession graduates are more likely to hold part-time work, have less household income, lower rates of home ownership, higher rates of food stamp use, and higher rates of disability, social security, and Medicare income compared to those who did not enter the labor force during a recession. Recession graduates are more likely to marry and have children earlier but also to have higher divorce rates, leading to overall lower marriage rates and cohabitation, with spousal matching reinforcing these negative effects. Although recessions can reduce short-term mortality, in part due to reductions in automobile accidents or other fatalities that may occur during work commutes, disease-related deaths (particularly heart disease, liver disease, and lung cancer) increase for recession graduates over time.
COVID-19 Recession and Data Needs
The longer-term outcomes of the impacts of COVID-19 may be somewhat unique compared to other economic recessions. The economy is, in principle, healthy and has evolved into remote work models that may prepare the workforce better for future crises. However, the pandemic has shown some downsides such as the potential for inflation and strong disparities in negative impacts across racial, ethnic, and socioeconomic groups. These downsides also include decreased work experience and hindered networks and social integration.

Discussion

Housing Security as a Measure of Wealth
Income is only one measure of economic circumstances and may not be a sufficient measure of economic circumstances. Other forms of financial data, such as home equity, housing security, or a history of social security earnings, could provide significant information, but some datasets are not publicly available or are available only in limited form (e.g., HRS historical earnings data is available only for a small sample of elderly individuals). The inclusion of wealth measures in large datasets would inform disparities in wealth accumulation or generational wealth. For example, housing insecurity, another aspect of wealth, was experienced during the pandemic more by some social groups than others.

Moderating Impacts and Persistent Effects
Several other unique factors may moderate impacts of the COVID-19 pandemic. On the positive side, an unprecedented level of financial support and safety net programs (through unemployment insurance and stimulus payments) have been provided by the U.S. government. Long-term research could investigate state-level policies implemented in the 5 years after the pandemic to understand how varying levels of government support impact residents. On the negative side, students who chose to delay their entry into the labor market may experience negative mental health impacts if “staying in school” actually resulted in staying at home. The harms to mental health can also negatively impact productivity and increase employment turnover. Students and families may also be impacted by students’ “failure-to-launch.”

Mortality
Historically during recessions, fatalities due to car accidents decrease as driving decreases. Unlike typical recessions, anecdotal data suggest that during COVID-19, the safest drivers stayed home, leading to an increase in driving-related fatalities. Driving may also have increased because most individuals are not flying to their destinations. However, roadside accidents can be viewed as an effect of economic and social activity rather than as a health effect.
Medium- and Long-Term Impacts of COVID-19 in the Service Sector
Kristen Harknett, PhD, University of California, San Francisco

According to the Bureau of Labor Statistics, the service sector employs one in five U.S. workers, roughly one-third of whom are parents and the majority of whom are over the age of 25. Service-sector jobs were typically low-quality before the pandemic: in a 2017-2019 survey, 25 percent of service workers reported experiencing hunger within the past 12 months, and nearly 25 percent reported difficulty paying bills within the past month. The service sector was further affected by conflicting forces during the pandemic, because many service workers were considered essential and received heightened appreciation for their increased risk of job exposure to SARS-CoV-2, while others who were not deemed essential were more likely to experience layoffs, furloughs, and reductions in hours in a slack labor market. As the sector emerges from the pandemic, major research questions include whether service workers recognized as essential will see a retrenchment in working conditions and whether the pandemic will hasten the industry’s shift toward automation.

Shift Project
The Shift Project collects data from a national web-based sample of hourly-wage workers in strategic geographic locations in order to identify company- and city-level data that are missing from existing datasets. Ten waves of sampling data have shown that public pressure campaigns could lead companies to offer sick leave to service workers even when it was not mandated by law. However, Shift has found that pandemic-era improvements in wages and stable work schedules were generally isolated and modest through fall of 2020. The pandemic’s impact on automation appears mixed: workers reported that the pandemic increased the use of certain service-sector technologies (e.g., online ordering) but reduced use of in-store technologies (e.g., self-service kiosks); separately from these trends, workers’ perceived threat that automation will replace their jobs fell by approximately 5 percent. Although a subjective measure, it is possible that service workers now view themselves as important and not easily replaceable.

Potential Long-Term Impacts
Many questions remain open about the long-term impacts of the pandemic on service-sector working conditions—for example, whether piecemeal local efforts to improve wages, paid leave, and scheduling will be taken up at the federal level, as well as the prevalence of and worker attitudes toward workplace automation.

Discussion

Scope of the Shift Project
The Shift Project uses the Bureau of Labor Statistics’ definition of a service worker, which includes retail workers and familiar food chains but excludes employees of small family-owned businesses. Compositional changes arose between pre-pandemic survey respondents and those who completed the survey in 2020; data covering displaced
workers and other compositional shifts will be included in future analyses. The experiences of on-demand or gig workers will also be available in a future analysis.

Future survey questionnaires will also likely contain more demographic information about workers’ immigration status; Shift avoided such questions in the midst of the ban on migration from Muslim-majority nations and increasing threats of deportation.

COVID, Carework, and Gender
Jerry A. Jacobs, PhD, University of Pennsylvania

The pandemic has created a natural experiment in remote work whose positive effects for women may become clearer as childcare and schools reopen. The pandemic has disproportionately affected women, and not all working mothers can work remotely. However, increased opportunities to work remotely will likely benefit many working women in post-pandemic life, and national investments by the federal government may assist all working parents and help mitigate potential for inequality.

Disparities in Employment by Gender
Women’s employment overall was impacted by the pandemic in racially disproportionate ways, with Black and Hispanic women more negatively impacted than white women. Workers in the leisure and hospitality industry are particularly likely to be affected, with sector employment in April 2021 down nearly 17 percent; beyond sheer labor participation, the gender gap in work hours also grew early in the pandemic by 20 to 50 percent. Most unpaid labor that occurs in the home is also still unequally conducted by women, even as men are performing more domestic labor than before. Not all families have the same circumstances, and data should capture the diversity of groups within American society.

Work-Life Balance
Although each family is different, the flexibility of remote work is generally positive for workers, and the pandemic has shown employees and employers that remote work is a viable option. However, remote work does come with caveats. Employees face the risk of being consistently “on call” and may not receive compensation for over-time. There is also a risk of disparities in digital cultural capital, which includes access to high-speed internet and computers and skills to manage digital presence. People working remotely may lose promotion opportunities and accrue more housework and parenting responsibilities, which could reinforce stereotypical gender roles. The Biden administration Family Care Plan could help all parents by providing high-quality, affordable childcare, which could increase the overall labor force participation and opportunities for women to improve their career prospects.

Future Data Tracking Opportunities
Ongoing data systems will remain valuable for tracking short- and long-term impacts of the pandemic. Data on families, not just individuals, are important, and should include oversamples of subgroups (e.g., single mothers).

Discussion
Navigating Remote Work
As work has transitioned to digital media, remote workers and parents have had to apply new skillsets to navigate their digital identities along with their children’s screen time. An individual’s digital presence can include how they appear on camera and boundaries between their personal and professional lives.

Work-life balance is also impacted by the shift toward remote work. Many workplaces have not made explicit modifications to their policies, but the Fair Labor Standards Act (FLSA) also does not offer protections, because employees who are exempt from overtime compensation are also typically those who have the opportunity to work from home.

Gendered Discrepancies
Though women have taken on additional domestic and childcare tasks during the pandemic, ultimately men may better understand the importance of their domestic roles and help to further reduce gender disparities.

Opportunities for Qualitative Research
Traditionally, quantitative researchers have been able to take advantage of pressing research needs compared to qualitative research. The collection of qualitative data could inform understanding of how families make decisions and how individual family members are affected by those decisions.

The Gendered Consequences of COVID-19: Initial Insights for American Families
Leah Ruppanner, PhD, University of Melbourne

As many researchers have noted, COVID-19 has been a “she-cession” with a disproportionately negative impact on women. Women have experienced higher job losses and a slower recovery compared to men. These effects are exacerbated for women of color. Recent data for February to April 2020 show that even for telecommuting couples, mothers (particularly mothers of very young children) decreased their work time without corresponding changes in working hours by working fathers, increasing the gender gap in work hours by 20 to 50 percent. Working fathers exited the labor force at rates roughly 1 to 2 percentage points lower than working mothers, for a total of 250,000 more women with children under age 13 leaving the labor force.

Impacts of Childcare Availability
Parental and maternal employment levels are highly impacted by the availability of in-person education, which is an integral component of childcare infrastructure. In states where school was conducted fully remotely during the pandemic, such as Maryland, maternal employment decreased significantly from 2019 to 2020. States with hybridized or in-school education options did not have significant differences in maternal employment. This disadvantage is greater for African American mothers because schools offering in-person education have a student body that is predominantly white.

Impact of Policy Change
Policy changes that impact education availability could have a positive impact on families with young children. In states that make a larger percentage of children eligible for free prekindergarten education through the Head Start Program, fewer families are living in poverty. Increased Head Start enrollment eligibility rates have helped families escape poverty and maintain financial stability.

**Future Data Needs**

Future research by Dr. Ruppanner will leverage data regarding school operating status with maternal employment to investigate differences in race, occupation, income, and parental resources throughout the COVID-19 pandemic. Dr. Ruppanner encouraged the research community to investigate how childcare centers operated and were impacted by the pandemic. Future research will also consider the power dynamics (racial and economic) between parents and teachers regarding school re-opening.

**Discussion**

**Impacts on School Re-opening**

Preliminary results of Dr. Ruppanner’s research show that the racial composition of school districts is a significant factor for re-opening. School districts that were predominantly white were more likely to reopen, while school districts with a higher concentration of Hispanic students were more likely to close. Preliminary findings also point to the power dynamic between parents and teachers being influential for re-opening decisions. Parents with more economic or social power over teachers were more likely to influence schools to reopen.

**Productivity**

Changes in employment status are frequently documented, but changes in productivity could also be affected by childcare availability. Dr. Ruppanner’s research has confirmed other findings that productivity increases during the pandemic are generally associated with men. Although men have increased their domestic labor, it remains significantly lower than women’s. Preliminary results also show that women in academia are being asked to assume additional service work within their institutions, which will likely lead to gendered and racialized disparities in tenure awards.

**Increased Caregiving for Older Adults**  
*Andrea Gilmore-Bykovskyi, RN, PhD, University of Wisconsin*

Dr. Gilmore-Bykovskyi considered the medium- and long-term impacts of COVID-19 on increased caregiving globally, particularly caring for individuals with dementia. The burden of caregiving is unequally distributed—most caregivers are between the ages of 47 and 51, 66 percent are women, and many are also parents to children under 18, sandwiching their care burdens. Disparities in the impacts of caregiving can be seen through the number of caregiving hours or intensity of care. On average, African American and Hispanic caregivers report spending more than 30 hours per week, while white and Asian caregivers report 20 and 15 hours per week, respectively. These disparities persist for the use of paid supports and services, which may be necessary in complex caregiving situations, for example, caring
for someone with dementia. This use is less frequent among caregivers with a lower socioeconomic status and among those who identify as Black or Hispanic. (While caregiving is spread across different sub-populations, it is important to note a gap in data for American Indian and Alaska Natives and for LGBTQ caregivers.) These disparities have consequences for how data are collected, particularly for lifecourse studies where the impact can be long lasting.

**Multiple Compounding Impacts**
The COVID-19 pandemic has compounded the strain of caregiving through, for example, unequal access to paid leave, supportive services and interventions, complex grief and bereavement, and other occupational and financial consequences. In addition to the emotional, psychological, and relational consequences that accompany caregiving, millennial caregivers have reported poorer physical health impacts due to caregiving responsibilities. In the medium term, these challenges may increase risk of elder abuse and complicate workforce re-entry; in the longer term, they may contribute to chronic disease burden, distal impacts on cognition, and accumulation of generational wealth. To understand the breadth of potential outcomes, future work should disambiguate the effects of increased caregiving by expanding outcome measurements to consider relevant social, cultural, and role appraisal impacts.

**Improved Assessment Measures**
To improve data collected about caregivers, researchers should take an intersectional approach and should consider the effectiveness and representativeness of current baseline assessments, which often do not adequately capture sufficient data about caregivers’ race, ethnicity, and gender, and in some instances are not validated for all sub-populations. Repeated cross-sectional studies, such as the Behavioral Risk Factor Surveillance Study, show persistent disparities between Black, Hispanic, and white populations on factors independently associated with chronic diseases of aging and increased risk of dementia.

Other research opportunities may include lifecourse-based studies, sub-population specific research, and retroactive tracking of outbreaks and occupational exposures. Researchers should take particular note to accurately assess the experiences of LGBTQ caregivers, who are not captured by current assessment tools.

**Discussion**

**Role Appraisals**
To overcome the limitations of current models of assessing stress and coping for caregivers from minoritized groups, studies could ask very concrete questions about time spent on caregiving, work lost, adjustments made to daily life (e.g., moving), or personal losses (e.g., financial, housing). This approach can address the fact that many such caregivers may not agree that caring for a loved one is a burden; for example, a caregiver may state, “my mother is never a burden to me.” Deeper assessments of marginalized groups will also be critical for understanding medium- and long-term consequences of aging, caregiving, and the risks associated with ADRD.
**Age and Racial Disparities**

Millennial caregivers, whose peak age is 40, have the potential to be “sandwiched” in caring for children under 18 as well as an older adult, which may account for greater impacts they have experienced from caregiving. Younger caregivers are also more likely to be Black, Hispanic, or of lower socioeconomic status.

**Health Study Design**

When designing multipurpose studies, timing for questions is constrained. The most pertinent dimensions of caregiving to include are the language used to identify caregivers; the number of hours spent supporting someone else; and occupational consequences. Many individuals do not realize they are in a caregiving role, so questions should ask whether they regularly provide support to someone in their life in these various domains. Occupational consequences (i.e., changes in schedules, reduced work hours, not taking vacation) for caregivers can inform researchers about life changes due to the amount of support provided. Researchers could also consider asking about the number of individuals to whom care is provided, to inform the intensity of support from an individual caregiver.

**Discussion**

**Housing**

COVID-19 changed some people's ability to live how and where they once resided. Many families moved into a single location to afford housing, leading college-aged students to take on new caregiving roles and exposing caregivers to more intense caregiving effects. Shifts in cohabitation have varied by subgroup. Based on prior data, African American families are more likely to cohabitate and to take more drastic measures to avoid institutionalized care. Forthcoming data from the National Survey of Caregiving and Health and Retirement Study will likely bring some insight into whether families have delayed the acquisition of formal elder care or have removed family members from long-term care facilities due to fears of COVID-19.

COVID-19 also exacerbated the problem of homelessness for school-aged children who depended on in-person schooling for support. Questions remain about whether schools should remain resources to alleviate the impacts of homelessness and poverty or whether other spaces should address these problems.

**Community-Oriented Measures**

Current data sets focus predominately on individuals, but many of the impacts of COVID-19 affect families and communities. Medium- and long-term impacts will likely be better informed if data sets adopt a more community-oriented perspective. At present, individuals can be asked about their geographical communities and social networks, much like the National Longitudinal Study of Adolescents to Adult Health (Add Health) collects data on individuals’ social networks. Researchers engaging in social network research should be cognizant of the impacts of individuals’ perceptions of their own networks, which—even when inaccurate—can influence understandings of health threats and possibilities. Self-report data can thus offer a unique and powerful tool to understand behaviors with direct health outcomes.
**Social Isolation**
The impacts of social isolation during COVID-19, particularly on people in sensitive periods of development and aging, may have ongoing health impacts that may be assessed through longitudinal studies.

**Long-Term Care Facilities**
Long-term care facilities may play a large role in how the next pandemic is handled. These facilities traditionally care for vulnerable communities, who may be averse to long-term care and experience care with lower outcomes. However, these facilities are also often staffed by underpaid and disenfranchised caregiving staff. Establishing policies that invest in the nursing-home workforce, reimburse nursing homes at adequate rates, and allow nurses to care for patients without overburdensome regulatory work may help improve nursing home care.
Appendix 1: Agenda

1:00 pm  Welcome and Introductions; Goals for the Seminar  
*John Phillips*, National Institute on Aging

1:10 pm  Session 1: Medium- and Long-Term Impacts of Disruptions to the Educational Process

Immigrants and educational disruptions, *Amy Hsin*, Queens College, City University of New York

Medium- and long-term impacts of graduating in a recession: Implications for understanding the consequences of pandemic-related economic disruptions, *Hannes Schwandt*, Northwestern University

2:10 pm  BREAK

2:20 pm  Session 2: Medium- and Long-Term Impacts of Job Loss and Labor Market Disruptions

Medium- and Long-Term Impacts of Covid-19 in the Service Sector, *Kristen Harknett*, University of California, San Francisco

Employment reductions/loss and gender in the pandemic: What are the medium- and long-term implications? *Jerry Jacobs*, University of Pennsylvania

3:20 pm  BREAK

3:30 pm  Session 3: Medium- and Long-Term Consequences of Increased Caregiving during the Pandemic

Medium- and long-term consequences of increased caregiving for children and their families, *Caitlyn Collins*, Washington University in St. Louis & *Leah Ruppanner*, University of Melbourne

Medium- and long-term consequences of increased caregiving for older adults, *Andrea Gilmore-Bykovskyi*, University of Wisconsin-Madison

4:30 pm  General Discussion; Data Needs/Implications for LifeCourse Studies

5:00 pm  Adjournment
Appendix 2. List of Committee Members and Presenters

Committee Members
Kathleen Mullan Harris (Chair), University of North Carolina Chapel Hill
Emily M. Agree, Johns Hopkins University
Deborah Balk, Baruch College
Nancy Birdsall, Center for Global Development
Ann K. Blanc, Population Council
Courtney C. Coile, Wellesley College
Dana A. Glei, Georgetown University
Robert A. Hummer, University of North Carolina, Chapel Hill
Hedwig (Hedy) Lee, Washington University
Jennifer J. Manly, Columbia University
Anne R. Pebley, University of California, Los Angeles
Isabel V. Sawhill, Brookings Institution
David T. Takeuchi, University of Washington
Rebecca Wong, University of Texas Medical Branch

Presenters
Andrea Gilmore-Bykovskyi, University of Wisconsin-Madison
Kristen Harknett, University of California, San Francisco
Amy Hsin, City University of New York
Jerry Jacobs, University of Pennsylvania
Leah Ruppanner, University of Melbourne
Hannes Schwandt, Northwestern University

Other Participants
Caitlyn Collins, Washington University in St. Louis
Andy DeSoto, Association for Psychological Science

National Institute on Aging
John Phillips, Chief, Population and Social Processes Branch, Division of Behavioral and Social Research (DBSR)
Amelia Karraker, Program Official, DBSR
Georgeanne Patmios, Senior Scientific Administrator, DBSR

Rose Li and Associates, Inc. (Contractor to the NIA)
Shadya Sanders, Science Writer

CPOP Staff
Malay K. Majmundar, Director, Committee on Population
Mary Ghitelman, Senior Program Assistant
Appendix 3. Chat Transcript

From Dana Glei to Everyone: 01:42 PM

Is the low in-person schooling among Asians partly a result of geographic distribution. CA has a lot of Asians and schools here shut down entirely for more than a year.

From Patricia Heyn, PhD, FGSA, FACRM to Everyone: 01:43 PM

It will be great, and certainly the right path to integrate the public school into public health education and programs, such as climate health, food sustainability etc. that is so needed. the problem is how to break into the curriculum when the parent associations do not want us to teach sciences to the children. Thus, this is one of the factors why USA has not been successful in integrating early education into our societal issues.

From Jennifer Manly to Everyone: 01:50 PM

Just a thought/comment: Communities will trust schools to provide public health resources (and as we are saying, we could potentially leverage that even further moving forward) unless those schools are over-policed.

Not a question: I have a case study n = 3 about remote learning outcomes. Which is making it hard to be a "scientist" in this discussion.

From Rebeca Wong to Everyone: 02:14 PM

Hannes: Do the data sources have measures of WEALTH? In addition to income, housing wealth may be relevant for the recession cohorts, with housing insecurity experienced by some social groups more than others.

From John Phillips (NIA) to Everyone: 02:19 PM

Any thoughts on the impact delaying start or completion of college due to remote school/school closure?

From Amy Hsin to Everyone: 02:27 PM

Comment: unintentional consequence is the expansion of remote learning. Pandemic forces K-16 to build remote infrastructure and very tempting to continue using it because it is scalable and cheap but necessarily good for students.

From Caitlyn Collins to Everyone: 02:31 PM

Here’s a link to the Shift Project: https://shift.hks.harvard.edu/
From Isabel Sawhill to Everyone: 02:32 PM

Definition of service sector? About 70% of GDP in service sector so can how can it account for only 1 in 5 workers?

From Dana Glei to Everyone: 02:47 PM

Are gig workers (i.e., those who are not employees) included in the survey? Any idea how they fared during the pandemic?

From Anne Pebley to Everyone: 02:52 PM

Any results by race, ethnicity, and immigrant status?

From Isabel Sawhill to Everyone: 03:04 PM

Kristen, wonderful presentation. Could you share your slides with me: isawhill@brookings.edu. Thanks!

From Caitlyn Collins to Everyone: 03:06 PM

Jerry's article is published in a Gender & Society special issue on the gendered impacts of COVID-19 available here: https://journals.sagepub.com/toc/gasa/35/2

From Mary Ghitelman to Everyone: 03:13 PM

Just an FYI to everyone that we are hoping to post all of today's presentations on our website.

From Dana Glei to Everyone: 03:17 PM

Kristen has a q

From John Phillips (NIA) to Everyone: 03:19 PM

How does that work for workers deemed exempt from FLSA?

From Courtney Coile to Everyone: 03:21 PM

COMMENT not question: both talks raise the possibility that COVID may change work arrangements and benefits in a way that is positive for workers. This is a nice change from constantly hearing about the negative effects of the pandemic! Of course there is also the potential for negative effects due to more automation, decreased ability to set work-life boundaries, etc.
From Kathleen Mullan Harris to Everyone: 03:26 PM

Good point Courtney, what I see is the potential for increasing disparities such that more advantaged workers can work remotely while essential, service sector workers can not, exacerbating disparities by gender, race/ethnicity, SES, etc.,

From Amy Hsin to Everyone: 03:55 PM

I didn’t know about your data collection project on school closures. Excellent. Can you talk about what are the factors that determine modality of instruction? Likelihood of offering in-person instruction?

From Hannes Schandt to Everyone: 03:59 PM

Could you share the link to the data collection here in the chat? Thanks! :)

From Caitlyn Collins to Everyone: 04:00 PM

https://osf.io/zeqrj/

From Nancy Birdsall to Everyone: 04:00 PM

Pretty much the same findings across the developing world: women’s employment and earnings decline more, and more if young children. Sources include ILO data on employment and earnings which are reasonably comparable across countries. These findings — close to universal and not surprising— mean that results such as the effect of Head Start are really important.

From Kristen Harknett to Everyone: 04:00 PM

COMMENT: Wonderful to know about your database. Thanks so much for making that publicly available!

From Amy Hsin to Everyone: 04:01 PM

Comment: sharing this cross-country study of school closures that show countries with more gender egalitarian polices were more likely to open faster.  
https://osf.io/preprints/socarxiv/k7qe9/

From Isabel Sawhill to Everyone: 04:03 PM

Some wonderful data presented in all of the slides for this afternoon’s sessions. Can they be collected and shared with all of us? Or do we need to request them from each scholar that presented

From Mary Ghitelman to Everyone: 04:04 PM
Belle, yes, we are planning to collect and share the slides from today.

**From Nancy Birdsall to Everyone: 04:04 PM**

Good idea from Belle Sawhill — to share the presentations.

**From Jennifer Manly to Everyone: 04:06 PM**

That was a wonderful presentation Leah and Caitlyn!

**From Leah Ruppanner to Everyone: 04:06 PM**

Thank you all of the opportunity to be a part of this!!

And, Amy - hi!!! And, thanks for the link :)

**From Anne Pebley to Everyone: 04:12 PM**

Andrea: I may have missed this, but where do these data come from?

**From Jennifer Manly to Everyone: 04:13 PM**

Anne the cites for her data are in light script at the bottom of the slide
the last slide indicated AARP as a source. Mary, will the slides be shared?

**From Mary Ghitelman to Everyone: 04:14 PM**

Yes, we're hoping to share the slides.

**From Anne Pebley to Everyone: 04:14 PM**

Thanks, Jennifer. It sounds like the numbers come from a variety of sources.

It's just that the frequencies can vary a lot depending on the source of the data -- but it wouldn't change the overall discussion.

**From Jennifer Manly to Everyone: 04:16 PM**

Got it.

**From Isabel Sawhill to Everyone: 04:24 PM**

Andrea, glad you mentioned importance of paid leave. Last year I helped commission additional research on caregiving published here for those who might be interested: https://www.aei.org/research-products/report/paid-leave-for-caregiving-issues-and-answers/. Especially want to flag paper by Vicki Freedman, a former member of this Committee and an expert on the data in this area.
From Ann BLANC to Everyone: 04:33 PM

If anyone is interested in our analysis of journal submissions and the impact of the pandemic on population researchers more broadly, here’s the link:

https://knowledgecommons.popcouncil.org/cgi/viewcontent.cgi?article=1003&context=series_pdr_essays-covid

From Jennifer Manly to Everyone: 04:39 PM

I have a question

From John Phillips (NIA) to Everyone: 04:39 PM

Broad recommendations from the group as well!

From Leah Ruppanner to Everyone: 04:40 PM

Andrea, could you again provide that question stem into the chat? We had a survey question on caregiving under COVID and got way lower response rates than we anticipated

From Andrea Gilmore Bykovskyi to Everyone: 04:44 PM

Yes: 1) Are you currently providing support to someone in your life with their health, home, or financial needs? (Cover ADLs and IADs but with different language); 2) How much time do you spend in these activities on average weekly (Likely want to specify a timeframe for response consistency- i.e. for past 4 weeks); 3) Have you had to make changes to your job or work because of the support you are providing, and maybe 4) do you support more than one person

From Caitlyn Collins to Everyone: 04:44 PM

This is so helpful, Andrea—thank you.

From Robert Hummer to Everyone: 04:44 PM

Thank you Andrea... awesome!

From Leah Ruppanner to Everyone: 04:45 PM

THANK YOOOOOU!!!

From Andrea Gilmore Bykovskyi to Everyone: 04:47 PM

Yes, I am so excited to hear NHATS/NCOS will address this in the next wave!

From Leah Ruppanner to Everyone: 04:48 PM
Jennifer, one of the things I wonder is whether families moved to other states that had schools and economies that were open. So, mobility that has implications for housing and caregiving especially for families providing intergenerational care.

From Rebeca Wong to Everyone: 04:49 PM

Also, the stress related to giving care is quite influenced by WHO ELSE provides care to a target older adult. If the burden is distributed among more people, the burden may be more (or less) bearable. For example, 1) Does someone else share the care you are providing? (family or paid help). 2) do you feel supported by others to make decisions about the care you give?

From Emily Agree to Everyone: 04:50 PM


From Jennifer Manly to Everyone: 04:53 PM

Leah, that highlights the importance of pre-COVID resources (wealth, social networks) in post-covid decisions and mobility. At one point last year, I would have seriously considered Idaho as my new home if I had limitless resources! And that is saying a lot.

And Rebeca those are great questions.

From Leah Ruppanner to Everyone: 04:54 PM

Yes total!! I imagine mobility would (potentially) be highest at the tails of the income distribution - those with the most and the least have most mobility. This is an empirical question, obvs, and I could be wrong ;)

From Andrea Gilmore Bykovskyi to Everyone: 04:55 PM

A general thought on caregiving networks which I agree is a very important area for research: it may be important to not assume that larger or more network members is better; coordination is a complex task and there can redundancies, inefficiencies, and conflict that also introduce challenges.

From Emily Agree to Everyone: 04:55 PM

This is also why prisons have been hit so hard.

From Courtney Coile to Everyone: 04:57 PM

To Bel’s point, one study finds that the fact that workers work at multiple facilities might be responsible for 45-50% of the nursing home deaths. Upgrading the quality of these jobs so that people can have one good job instead of several part-time jobs is a long-term policy that would be helpful reducing disease spread, and good for these workers.
From Anne Pebley to Everyone: 04:59 PM

Thanks so much, Andrea! These are very important points about the marginalization of staff of nursing homes.

From Emily Agree to Everyone: 04:55 PM

This is also why prisons have been hit so hard.

From Courtney Coile to Everyone: 04:57 PM

To Bel's point, one study finds that the fact that workers work at multiple facilities might be responsible for 45-50% of the nursing home deaths. Upgrading the quality of these jobs so that people can have one good job instead of several part-time jobs is a long-term policy that would be helpful reducing disease spread, and good for these workers.

From Anne Pebley to Everyone: 04:59 PM

Thanks so much, Andrea! These are very important points about the marginalization of staff of nursing homes.

From Amy Hsin to Everyone: 05:01 PM

To Be;

From Jennifer Manly to Everyone: 05:01 PM

I have to drop off in a couple minutes!

From Ann BLANC to Everyone: 05:02 PM

My apologies - I have to get on another call now.

From Hannes Schwandt to Everyone: 05:02 PM


From Courtney Coile to Everyone: 05:02 PM

Study I mentioned on how nursing home networks (workers at multiple facilities) contributed to NH deaths: https://www.nber.org/papers/w27608

From Deborah Balk to Everyone: 05:03 PM

me too. see everyone t'mow.

From Amelia Karraker to Everyone: 05:04 PM
thanks everyone