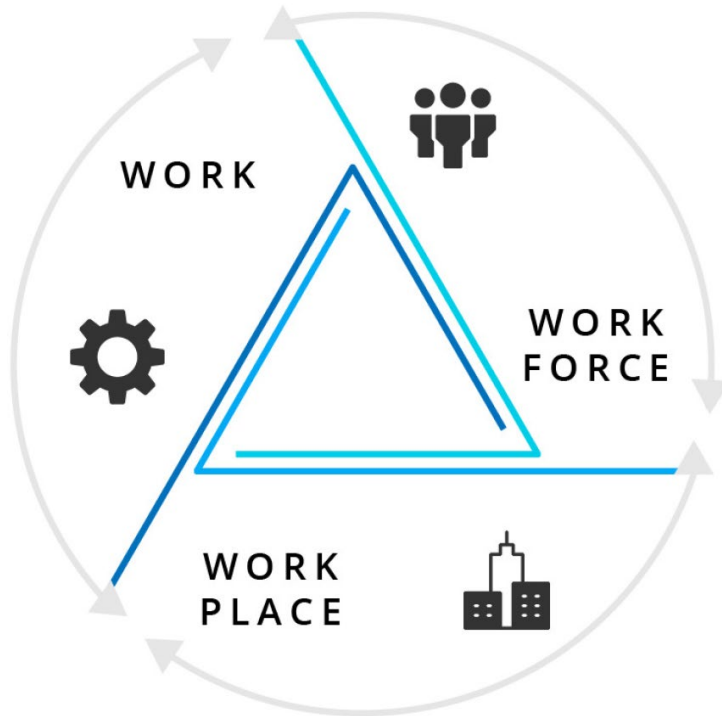# COVID-19 Pandemic: Reshaping the Workplace, Work, and Workforce

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July 2022

Future of Work Initiative

"The future is not predestined; it is influenced by the choices we make today.

No one knows for certain what the future holds for occupational safety and health. What is exceedingly clear, however, is that we must take proactive steps now to ensure the safety, health, and well-being of the workforce.

Now is the time to evaluate the risks and seize the opportunities presented by future of work advances by developing evidence-based research solutions for the future workforce.

There is no launch date for the future; it starts now."

– John Howard MD, Director of the NIOSH

https://www.cdc.gov/niosh/topics/future-of-work/

CDC/NIOSH Future of Work Initiative Priority Topics

Issues that Impact Workplace, Work, and Workforce	Emergency and Disaster Preparedness and Response • Exposures and Hazards • Extreme Weather Conditions • Globalization • Industry 4.0 • OSH 4.0 • Policies • Politics • Resources • Social Disruption

WORKPLACE

ORGANIZATIONAL DESIGN	Autonomy • Burnout and Stress Prevention • Healthy Leadership • Job Flexibility • Leave Systems • Scheduling • Social and Corporate Responsibility • Workplace Built Environment • Workspace • Work-Life Fit
TECHNOLOGICAL JOB DISPLACEMENT	Automation • Digitalization • Job Quantity and Quality • Occupational Polarization • Productivity Enhancement and Quality Improvement through Automated Manufacturing • Stable, New, and Redundant Work
WORK ARRANGEMENTS	Alternative • App-Based • Contingent • Contractual • Direct Hire • Distributed • Free-Lancer • Job Sharing • Non-Standard • On-Call • On-Demand • Part-Time • Platform • Precarious • Seasonal • Single vs. Multi-Employers • Temporary

WORK

ARTIFICIAL INTELLIGENCE	Deep Learning • Machine Learning • Neural Networks
ROBOTICS	Autonomous, Collaborative, Industrial, Managerial, Service, and Social Robots • Autonomous Vehicles • Human-Machine Interaction • Unmanned Aerial Systems • Wearable Exoskeletons and Exosuits
TECHNOLOGIES	Additive and Smart Manufacturing, and 3D Printing • Advanced, Cloud, and Quantum Computing • Bio-Manufacturing • Bio-Technology • Clean and Green Technologies • Digitalization • Information and Communication Technologies • Internet-of-Things • Nanotechnology and Advanced Materials • Sensors • Sensor Surveillance • Smart Personal Protective Equipment

WORKFORCE

DEMOGRAPHICS	Diversity and Inclusivity • Multi-Generational • Productive Aging • Vulnerable
ECONOMIC SECURITY	Adequate Wages • Equitable and Commensurate Compensation and Benefits • Minimum Guaranteed Hours
SKILLS	Continual Education, Learning, and Training • Re-Skilling and Up-Skilling

3

COVID-19 by the Numbers

Daily Update for the United States

Cases
New Cases (Daily Avg)
126,023

Case Trends

Jun 2022   Jul 2022

Deaths
New Deaths (Daily Avg)
348

Death Trends

Jun 2022   Jul 2022

Hospitalizations
New Admissions (Daily Avg)
5,918

Admission Trends

Jun 2022   Jul 2022

Vaccinations
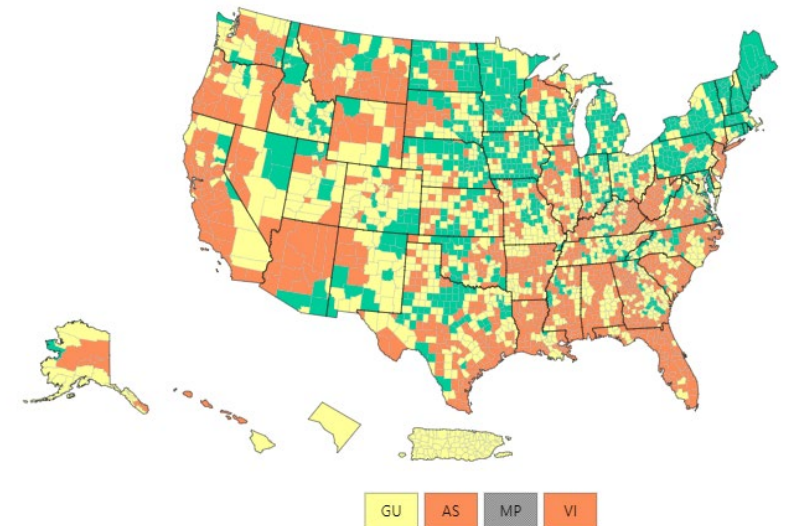% First Booster Dose
34.2%

People Age 5+

Total Cases	Total Deaths	Current Hospitalizations	Total First Booster Dose
89,067,445	1,018,578	33,530	107,004,061

CDC | Data as of: July 15, 2022 1:29 PM ET. Posted: July 15, 2022 2

COVID-19 Community Levels of All Counties in US

GU   AS   MP   VI
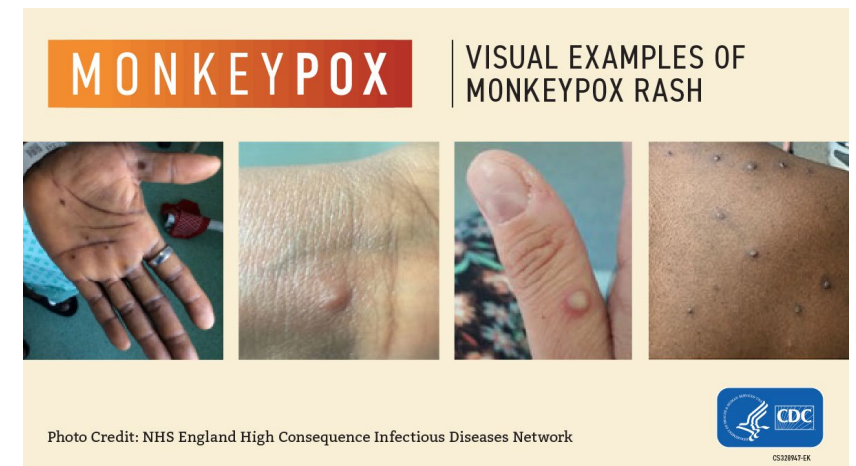
2022 Monkeypox Outbreak

Case Counts as of 7/20/22
US: 2322
International: 14,268

Photo Credit: NHS England High Consequence Infectious Diseases Network

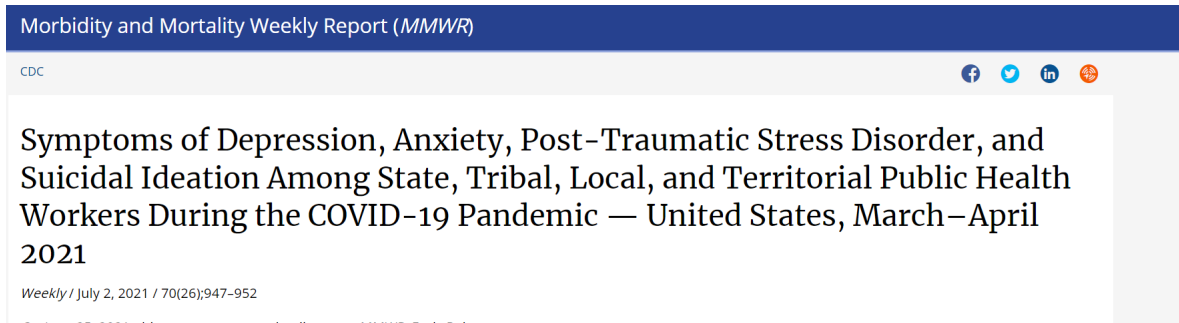[2022 U.S. Map & Case Count | Monkeypox | Poxvirus | CDC](#)

How will the pandemic shape the future of work?

Disruptions to the Traditional Workplace

- **COVID Transmission Worries**
  - Fear of contagion in high-contact industry sectors

- **Early retirements**
  - Baby boomers are retiring faster than usual

- **Added Care responsibilities**
  - Women disproportionately left workforce
  - School closures depressed female labor participation
  - Caring for COVID-19 affected family member

- **More Savings**
  - Cash balances were up 50% for typical household in July 2021 relative to 2 years ago

- **Wages**
  - Businesses not paying a wage workers will accept
  - Wages risen more than 4.5%; leisure sector up 11%

- **Values**
  - Did pandemic make people value work less?

www.cnbc.com/2022/05/10/-the-great-resignation-has-changed-the-workplace-for-good-.html

Mental Health Burden During COVID-19

Increases in mental health conditions have been documented among health care workers, public health workers, and the general population

Morbidity and Mortality Weekly Report (*MMWR*)

CDC

Symptoms of Depression, Anxiety, Post-Traumatic Stress Disorder, and Suicidal Ideation Among State, Tribal, Local, and Territorial Public Health Workers During the COVID-19 Pandemic — United States, March–April 2021

Weekly / July 2, 2021 / 70(26);947–952

http://dx.doi.org/10.15585/mmwr.mm7048a5external icon

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Percentage* of Adults Who Received Any Mental Health Treatment in the Past 12 Months,† by Age Group and Year — National Health Interview Survey, United States, 2019–2020§
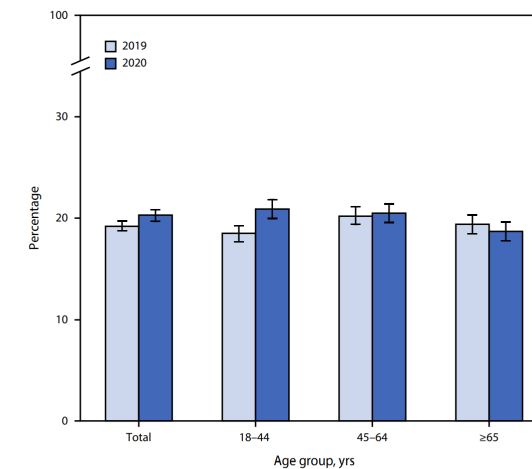
* 95% confidence intervals indicated with error bars.
† Adults were considered to have received any mental health treatment if they reported having taken prescription medication for their mental health or having received counseling or therapy from a mental health professional in the past 12 months.
§ Estimates are based on household interviews of a sample of the civilian, noninstitutionalized U.S. population.

The percentage of adults who had received any mental health treatment in the past 12 months increased from 2019 to 2020 overall (19.2% to 20.3%) and among adults aged 18–44 years (18.5% to 20.9%). In 2019, the percentage of adults who had received any mental health treatment in the past 12 months was lower among those aged 18–44 years (18.5%) compared with those aged 45–64 years (20.2%) and ≥65 years (19.4%). In 2020, the percentage decreased with age, from 20.9% among adults aged 18–44 years to 18.7% among those aged ≥65 years.

Sources: National Center for Health Statistics. NCHS data brief, no. 380. https://www.cdc.gov/nchs/data/databriefs/db380-H.pdf; NCHS data brief, no. 419. https://www.cdc.gov/nchs/data/databriefs/db419.pdf
Reported by: Emily P. Terlizzi, MPH, ljx9@cdc.gov, 301-458-4991; Tina Norris, PhD.

Trends Accelerated by COVID-19

- **Shift to Remote Working**
  - Remote work and virtual meetings are likely to continue, albeit less intensely than at the pandemic's peak, effects for real estate, business travel, and urban centers

- **Increased e-Commerce and Other Digital Platforms**
  - E-commerce and other virtual transactions have greatly accelerated, creating increased demand for non-standard or gig work arrangements for last-mile deliveries

- **Deployment of Automation and AI**
  - COVID-19 may propel faster adoption of automation and AI, especially in work areas with high physical proximity, and lead to labor effects

Lund et al. February 2021

Impacts on future infectious disease responses

- Recognition that strong partnerships are needed to ensure adoption of recommendations at the local level
  - Assistance needed to operationalize recommendations/practices
  - Need to ensure collaborations continue
- Improved tools and strategies to protect workers that can be applied
- Identify COVID-19 successes and apply to future responses, particularly around communications
- Expectations for transparency in data and information will continue
- Improved surveillance
  - Will we ever get industry and occupation questions added to reporting tools?

Can we anticipate new challenges to ensuring the safety, health, and well-being of our workforce?

COVID-19 Hierarchy of Controls

Workplace COVID-19 Plan to Minimize Transmission Risks in a Coronanormal Era

Hazard Elimination

- Prevent viral entry by symptom/temp check
- Vaccination
- SARS-CoV-2 testing
- Encourage symptom reporting within workplace
- Telework, if feasible
- Medical removal protection & contact tracing

Engineering Controls

- Restructure workplace spaces to ensure worker distancing
- Use partitions or barriers if workers cannot distance
- Improve ventilation through dilution, filtration, and air-cleaning
- Consider upper room germicidal irradiation

Administrative Controls

- De-densify by reorganizing workflow
- Use staggered shifts
- Infection control practices including barrier face coverings (ASTM F3502-21)
- Perform cleaning and disinfection
- Flexible sick leave
- Psychosocial support
- Train employees in hazards and controls

PPE

- N95s
- Gloves
- Face shields
- Gowns
- Fit-testing and respirator maintenance procedures

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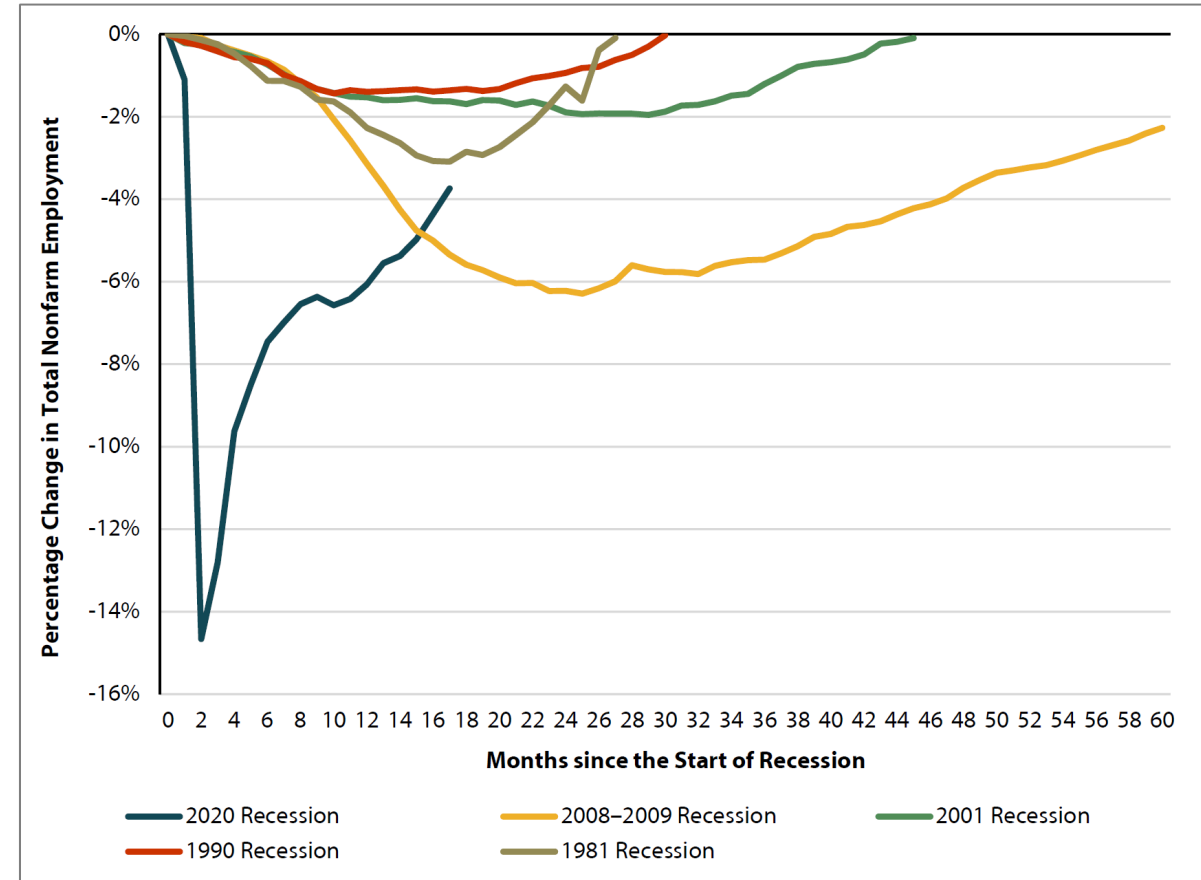- Fit-testing and respirator maintenance procedures

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348   www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

Domestic: Labor Market Challenges

- **COVID-19 Pandemic**
  - Most severe/abrupt change in total employment over the last 40 years
  - 22 million jobs lost between Feb/Apr 2020
  - 15% drop in total nonfarm employment

- **Record Quits and Employment Numbers Down**
  - Job Openings
    - 11.5M
  - Unemployment
    - 5.9M people considered out of work in the U.S.
  - *Quits*
    - *Quits* hit a new series high going back to December 2000, as 4.5M left their jobs.
    - Highest quits among professional and business services and construction and in the South region
  - Employment down by 1.2M

BLS, JOLTS, https://www.bls.gov/news.release/pdf/jolts.pdf (3 May 2022)

Source: https://fred.stlouisfed.org/series/PAYEMS