



Impacts of COVID-19 on Indicators 2022

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National Science Board Meeting
July 2020

National Center for Science and Engineering Statistics (NCSES)
Social, Behavioral and Economic Sciences
National Science Foundation



NCSES: NSF's federal statistical agency

- Mission: policy-neutral policy-relevant statistical data on the U.S. science and engineering enterprise often in a global context
- Federal clearinghouse for data that provides key insights on the American economy, responsibility for data on:
 - Research and development
 - Science and engineering workforce
 - U.S. competitiveness in science, engineering, technology, and R&D
 - Condition and progress of STEM education



COVID-19 Impact: Indicators 2022 will use data that NCSES collects and analyzes from a variety of establishments and people.

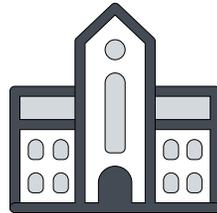
Establishments



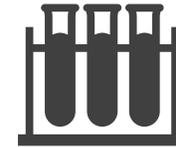
Businesses



Universities



Nonprofits

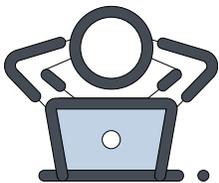


**Federally funded research
& development centers**



**Federal & state
government**

People



**S&E graduate
students**



**S&E college
graduates**



**Doctorate
recipients**



**Early-career
doctorates**

Impact of COVID-19 on data and analysis for Indicators 2022

- Reduced response rates
- Prolonged data collections
- Delayed data/report releases

Indicators 2022 Thematic Reports Affected

Science & Engineering Labor Force

- Potential delays with some data sources
- Report release anticipated for Summer 2021

Knowledge-Intensive Industries and Trade

- Potential delay of data availability until Fall 2021
- Report release anticipated for Winter/Spring 2022



Impacts of COVID-19 on National and International Statistics

Emilda B. Rivers, NCSES Director

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Today's Discussion

- Impact on National statistics
- Opportunities to understand the impact of COVID-19
- Impact on International statistics

Impact on National statistics

- 2020 Census
 - Extended collection window
 - Delay of data delivery by 4 months
- BLS Employment Situation
 - Lower response rate given suspended in-person visits
 - Adjustments in business births and deaths models
- Consumer price index
 - Missing data given in-person data collection suspended
 - Relied on phone or website searches for missing data



Opportunities to understand the impact of COVID-19

NCSES adding questions to the:

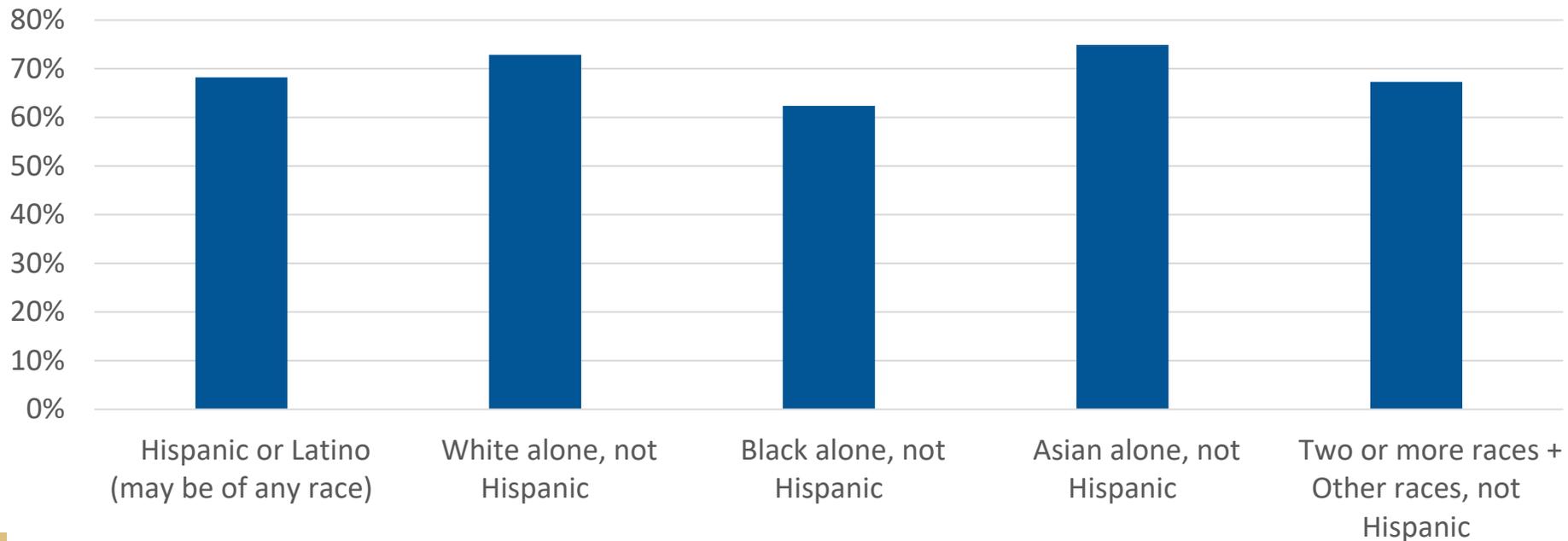
- Survey of Earned Doctorates (SED)
 - Impact on degree completion, employment opportunities, and postgraduation decisions and plans
- Higher Education Research and Development (HERD) Survey
 - Impact on R&D expenditures
- Annual Business Survey (ABS)
 - Financial impact



Opportunities to understand the impact of COVID-19

U.S. Census Bureau: Quick-turn around data collection

Availability of computer for educational purposes: Device always available for educational purposes

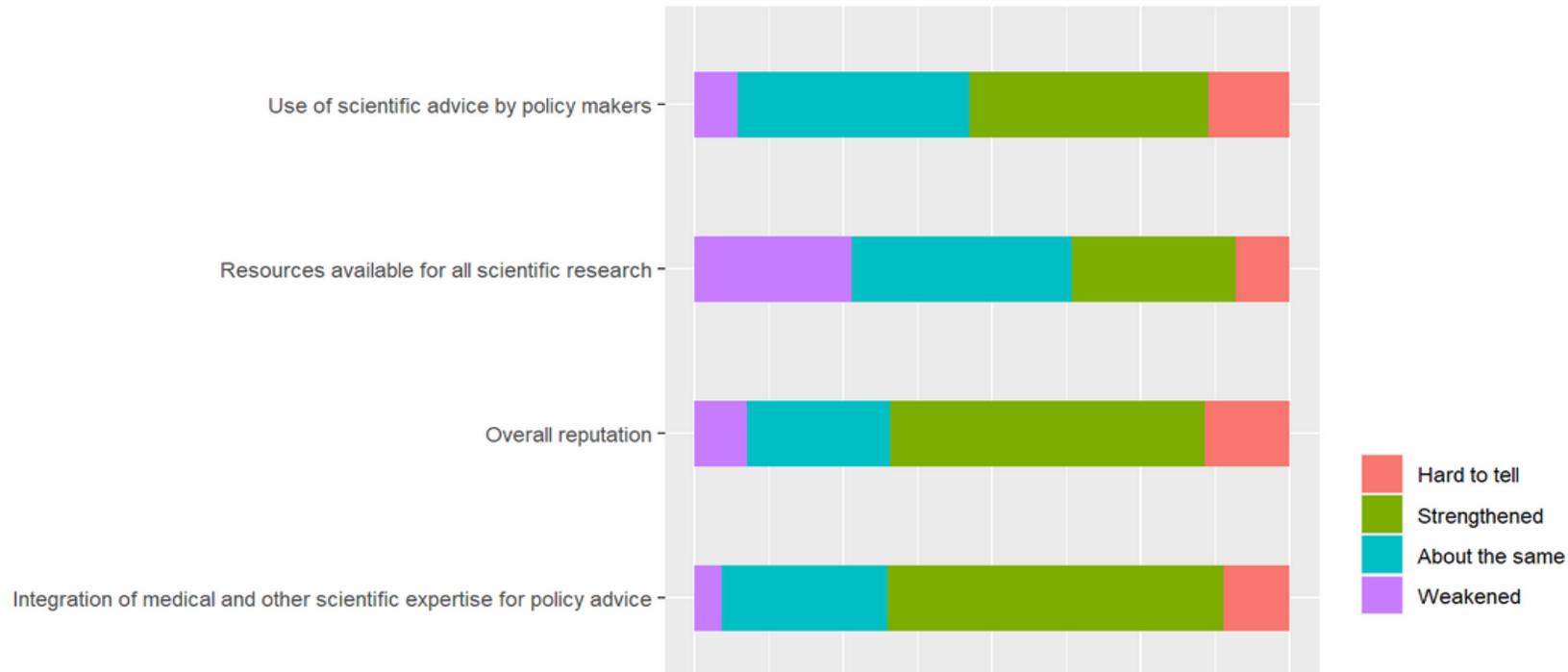


Opportunities to understand the impact of COVID-19

OECD Science Flash Survey 2020

Respondents' expectations about the future of the world of science

Q9. How do you expect the world of science to emerge out of the current crisis, in terms of...?



Impact on international statistics



- Workshop on statistical monitoring and analysis of science, technology, and innovation in times of crisis, with the following goals:
 - To discuss the emerging statistical needs for STI
 - To share national experiences in coping with the COVID crisis
 - To provide opportunity to showcase initiatives for increased resilience, impact, and relevance
 - Build a better understanding of the different trade-offs between possible statistical approaches and their suitability for addressing specific policy questions

Impact on international statistics

Workshop topics:

- Science, Technology, and Innovation (STI) measurement resilience during the crisis
- Monitoring business R&D and innovation
- Monitoring personal and societal STI engagement and trust during the crisis
- Measurement of STI resources and outputs devoted to fighting COVID-19 and building pandemic preparedness
- Monitoring institutional responses to the crisis



National Center for Science and Engineering Statistics <https://www.ncses.nsf.gov/>