



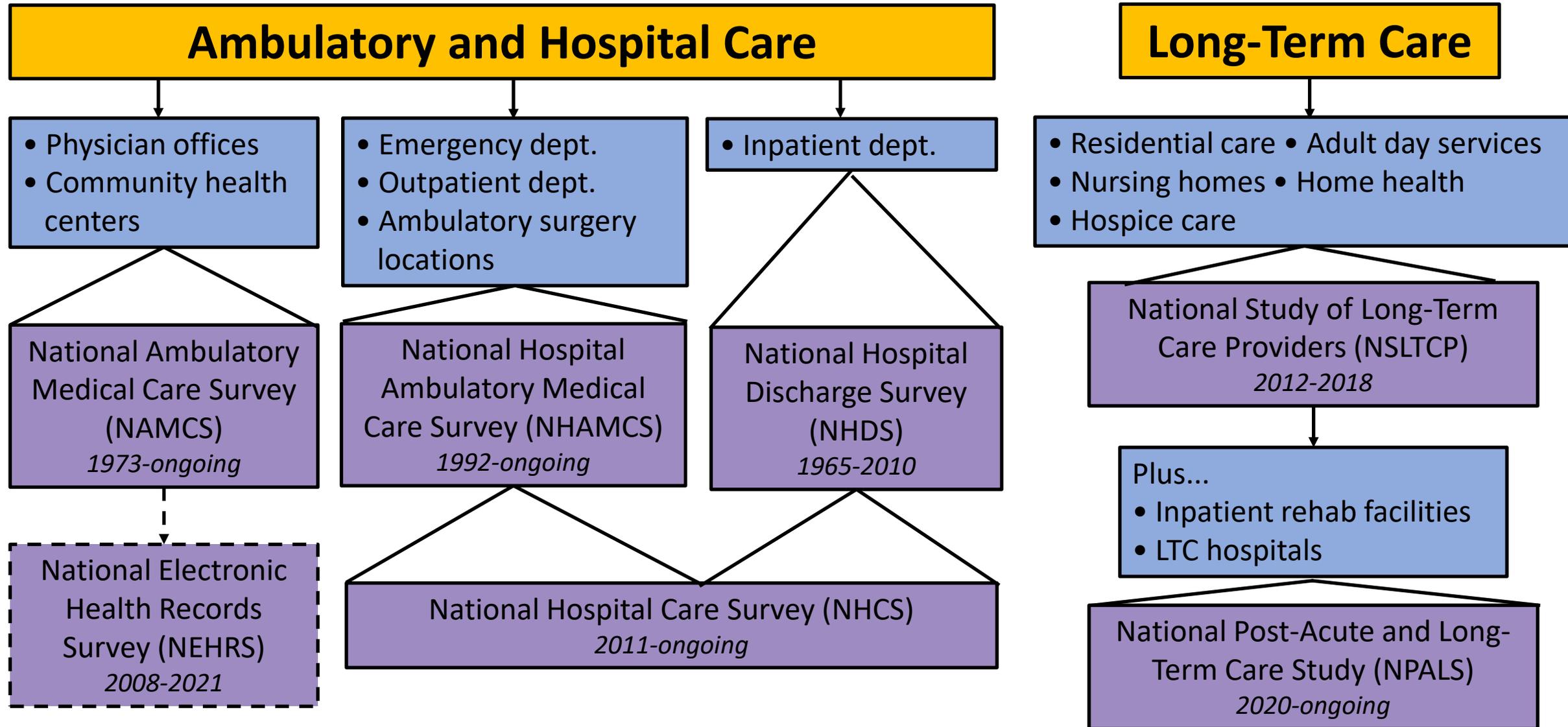
# **COVID-19 Pandemic Impact on the National Health Care Surveys**

**Carol DeFrances, Ph.D., Brian Ward, Ph.D., and Manisha Sengupta, Ph.D.**  
**Division of Health Care Statistics**

**2021 FCSM Research and Policy Conference**

November 2, 2021

# National Health Care Surveys Spectrum of Care



# National Ambulatory Medical Care Survey (NAMCS)

- **Purpose:** Designed to meet the need for objective, reliable information about the provision and use of ambulatory medical care services in the United States.  
**Sample:** Physicians classified by the AMA and AOA as providing office-based care; not federally employed and not in the specialties of anesthesiology, radiology, or pathology. Community Health Centers from listing maintained by HRSA.
- **Mode:** In-person induction interviews and on-site medical record abstraction for a sample of patient visits; conducted by U.S. Bureau of the Census Field Representatives (FRs).
- **Questionnaire:** Computerized induction questionnaire obtains data about characteristics of the physician and practice. Standardized form used for record abstraction.
- **Data collection:** Covers January–December annually, public and restricted use files.
- **Sample size:** 3,000 office-based physicians, 104 community health centers.

# NAMCS Challenges and Changes During COVID-19

## ■ Challenges:

- Ensure safety of U.S. Census FRs and physician office staff.
- Add COVID-19 questions in timely manner.

## ■ Changes:

- Delayed fielding from March 2020 to mid-May 2020; delayed an additional 4 weeks in “hot spots” (i.e., until July 2020).
- Moved to primarily CATI administration of Physician Induction Interview.
- Dropped abstraction of patients visits for physicians, but not health centers.
- Fielding for COVID-19 questions on the Physician Induction Interview started for physicians sampled in the second half of 2020.
- Release preliminary COVID-19 related data in October 2021.

# Coming Soon...



NCHS collects, analyzes, and disseminates information on the health of the nation. In response to the COVID-19 pandemic, NCHS is providing the most recent data available on deaths, mental health, and access to health care, loss of work due to illness, and telemedicine from the vital statistics system, the NCHS Research and Development Survey, and through a partnership with the U.S. Census Bureau.

For general information including symptoms, testing, and community safety, visit <https://www.cdc.gov>.

[Articles on NCHS Response to Coronavirus Disease 2019 \(COVID-19\)](#)



### Deaths

Access provisional death counts based on information obtained from death certificates.



### Cause-of-Death Certification

Guidance for certifiers on how to report deaths due to COVID-19 on death certificates.



### Births and Pregnancies

Access provisional data on births and COVID-19 cases among pregnant women and newborns.



### Health Care Access, Telemedicine, and Mental Health

Data from NCHS' partnership with the U.S. Census Bureau on the Household Pulse Survey.



### Health Care Access, Telemedicine, and Loss of Work Due to Illness

Data from NCHS' research survey RANDS during COVID-19.



### Hospital Data

Data from NCHS' National Hospital Care Survey describing patient care in hospital-based settings.



### Long-term Care and COVID-19

COVID-19-related data for residential care communities and adult day services centers.



### Physician Experiences

Data from NCHS' National Ambulatory Medical Care Survey describing office-based physician experiences related to COVID-19.

# National Electronic Health Records Survey (NEHRS)

- **Purpose:** Assess EHR adoption and capabilities, burden associated with EHRs, and progress physicians have made towards meeting the policy goals of the HITECH Act and the Promoting Interoperability programs.
- **Sponsor:** Office of the National Coordinator for Health Information Technology
- **Sample:** Physicians classified by the AMA and AOA as providing office-based care; not federally employed and not in the specialties of anesthesiology, radiology, or pathology.
- **Mode:** Multi-mode: web survey, mail survey and CATI (if needed).
- **Questionnaire:** 30-45 minute questionnaire; similar content/questions across mode.
- **Data collection:** Conducted annually 2008-2015, 2017-2020; restricted use files (all years); public use files (2018-2019).
- **Sample size:** 10,302 physicians for national/state estimates; 2,000 for national estimates only.

# NEHR Challenges and Changes Due to COVID-19

## ■ Challenges:

- Add telemedicine questions in a timely manner.
- No telework allowed for off-site contractor staff.

## ■ Changes:

- Delayed fielding until September 2020 to March 2021.
- Allow some telework for off-site contractor staff so data collection could continue.

# National Hospital Ambulatory Medical Care Survey (NHAMCS)

- **Purpose:** Originally designed to collect data on the utilization and provision of ambulatory care services in hospital emergency department (ED) and outpatient departments (OPD) and ambulatory surgery locations (ASL); since 2018 ED only.
- **Sample:** Includes visits to EDs of non-institutional, general and short-stay (<30 days) hospitals. Excludes visits to Federal, military, prisons, or Veterans Administration facilities.
- **Mode:** In-person induction interviews and on-site medical record abstraction for a sample of ED visits; conducted by U.S. Bureau of the Census FRs.
- **Questionnaire:** : Computerized induction questionnaire obtains data about characteristics of the hospital and ED. Standardized form used for record abstraction.
- **Data collection:** Covers January–December annually, public and restricted use files.
- **Sample size:** ~410 hundred hospitals.

# NHAMCS Challenges and Changes Due to COVID-19

## ■ Challenges:

- Ensure safety of U.S. Bureau of the Census FRs and hospital staff.
- Add COVID-19 related questions in timely manner.

## ■ Changes:

- Delayed fielding for one week to June 2020; delayed an additional 4 weeks in “hot spots” (i.e., until July 2020).
- Switched to administration of Hospital Induction Interview to CATI.
- Switched from in-person abstraction to remote abstraction.
- Added new COVID-19 questions for the 2021 data collection on Hospital Induction Interview.

# National Hospital Care Survey (NHCS)

- **Purpose:** Provide reliable and timely health care utilization data for hospital-based settings.
- **Sample:** Non-federal, non-institutional hospitals with 6+ staffed inpatient beds.
- **Mode:** Administrative claims data and electronic health record (EHR) data transmitted electronically to NCHS or its data collection agent.
- **Questionnaire:** Annual Hospital Interview collects facility information needed for statistical weighting.
- **Data collection:** January-December annually, restricted use files.
- **Sample size:** 608 hospitals; all inpatient and ED encounters (i.e., entire calendar year) requested.
- **Unique feature:** Personally identifiable information is collected, which allows data linkage across hospital settings and to external data sources such as the NDI, CMS, and HUD data.

# NHCS Challenges and Changes Due to COVID-19

## ■ Challenges:

- Concerned about increased burden on hospitals during COVID-19, even with all electronic data collection.
- Add COVID-19 questions in timely manner.

## ■ Changes:

- Fielding delayed for 2 months.
- Added COVID-19 questions to the 2020 Annual Hospital Interview; fielded starting in June 2021.
- Released preliminary data by week on COVID-19 for ~55 hospitals in more “real time” starting in February 2021; data now available for 37 hospitals through May 2021.



#### COVID-19 hospital encounters by week

Tabulated data show the percentage of confirmed, suspected, and potential COVID-19 and non-COVID-19 encounters over time, among all ED or inpatient encounters in the reporting hospitals. Data are presented for each setting (inpatient and ED) and for each week, by age and sex.



#### COVID-19 in hospitals by urban-rural location of the hospital by week

Tabulated data show the percentage of confirmed COVID-19 encounters, by hospital urban-rural location. Hospital location is grouped into three categories: large and fringe metropolitan area, medium and small metropolitan area, and rural area. Data are presented for each setting (inpatient and ED) and for each week.



#### COVID-19 screenings at hospitals by week

Tabulated data show the percentage of all hospitals encounters with a COVID-19 screening conducted in the hospital. Data are presented for each setting (inpatient and ED) and for each week, by age and sex. Additionally, the percentage of positive and negative screenings among total COVID-19 screenings are shown for each week, by age and sex.



#### Intubation or ventilator use in the hospital among confirmed COVID-19 inpatient admissions by week

Tabulated data show the percentage of confirmed COVID-19 inpatient admissions that involved intubation or ventilator use at any time during hospitalization. Weekly data are presented by age and sex.



#### In-hospital mortality among hospital confirmed COVID-19 encounters by week

Tabulated data show the percentage of confirmed COVID-19 encounters in which an in-hospital death occurred. Data are presented for each setting (inpatient and ED) and for each week, by age and sex. Additionally, data show the percentage of in-hospital deaths among confirmed COVID-19 admissions, with and without intubation or ventilator use. Lastly, data presented show the average length of stay among COVID-19 inpatient admissions by intubation or ventilator use and in-hospital mortality status.



#### Co-occurrence of other respiratory illnesses for hospital confirmed COVID-19 encounters by week

Tabulated data show the percentage of hospital confirmed COVID-19 encounters with the co-occurrence of other respiratory illnesses. Data are presented for each setting (inpatient and ED) and for each week, by age and sex.

## Preliminary NHCS data available by week

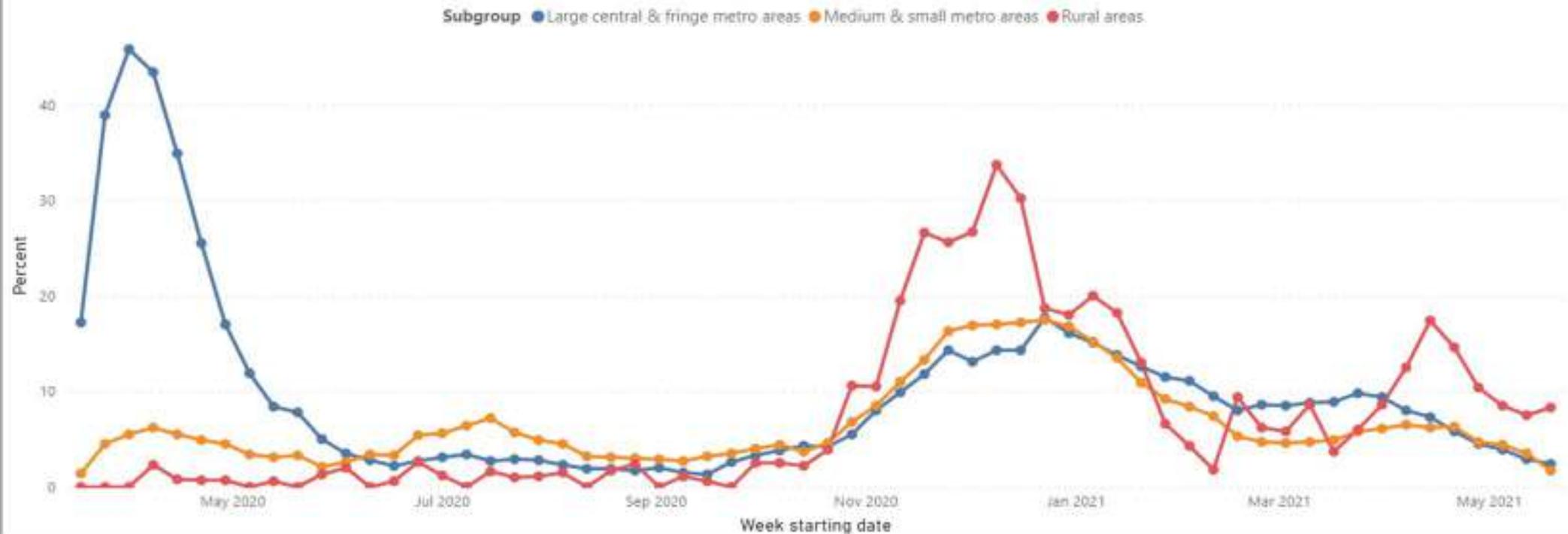
<https://www.cdc.gov/nchs/covid19/nhcs.htm>

## Example of NHCS preliminary data

### Percentage of encounters with a confirmed COVID-19 status from selected hospitals, by hospital urban-rural location and week

Select setting

Inpatient



**NOTE:** Data are not nationally representative.

**SOURCE:** National Center for Health Statistics, National Hospital Care Survey, 2020-2021

# National Post-Acute and Long-term Care Survey (NPALS)

- **Purpose:** Monitors trends in the supply, provision, and use of the major sectors of paid, regulated long-term care services.
- **Sample:** Adult day services center (ADSC) licensed by the state or certified to participate in Medicaid; Residential care communities (RCC) licensed or certified by the state, with 4 or more beds, providing two meals a day and around-the clock on-site supervision and help with activities of daily living.
- **Mode:** CMS administrative data purchased for hospice agencies, nursing homes, home health agencies, inpatient rehabilitation hospitals and long-term care hospitals. Primary multi-mode data collection (web, mail, telephone follow-up) for ADSC and RCC.
- **Questionnaire:** Provider questionnaire (provider and services user characteristics aggregated at the provider level). Services user questionnaire in alternate years.
- **Data collection:** Every two years, public use files only in 2018 (NSLTCP) and restricted use files.
- **Sample size:** ADSCs= ~5,550; RCCs=~11,600.

# NPALS Challenges and Changes

## ■ Challenges:

- Add COVID-19 and telemedicine questions in a timely manner.
- No telework allowed for off-contractor staff.

## ■ Changes:

- Delayed fielding for 2 months.
- Removed some existing questions to prioritize COVID-19 questions.
- Revised some questions to adapt to COVID-19 conditions (closures, changes in mode of service provision)
- Allowed some telework for off-site contractor staff so preparations for data collections could continue.
- Released preliminary data related to COVID-19 for RCCs and ADSCs in August 2021.

## Long-term Care Settings



### Residential Care Communities (RCC)

The data used in these figures are considered preliminary and the results may change after the release of the final 2020 NPALS data file, which will be updated in 2022. Data represent RCCs and not individuals. Topics covered in these figures include the number of COVID-19 cases, hospitalizations, and deaths among residents and staff, practices taken to reduce COVID-19 exposure and transmission, and personal protective equipment (PPE) shortages. The figures can display different groups depending on the measure of interest.



### Adult Day Services Centers (ADSC)

The data used in these figures are considered preliminary and the results may change after the release of the final 2020 NPALS data file, which will be updated in 2022. Data represent ADSCs and not individuals. Topics covered in these figures include the number of COVID-19 cases, hospitalizations, and deaths among participants and staff, practices taken to reduce COVID-19 exposure and transmission, and personal protective equipment (PPE) shortages. The figures can display different groups depending on the measure of interest.

## Preliminary NPALS data

<https://www.cdc.gov/nchs/covid19/npals.htm>

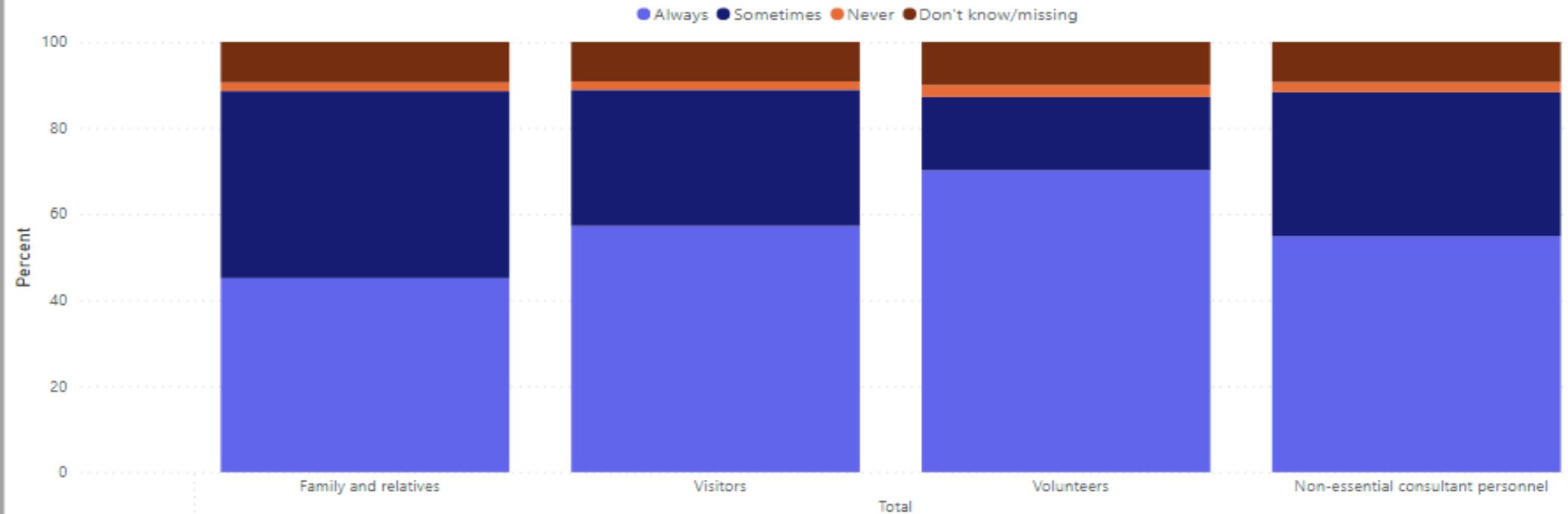
# Example of preliminary data for RCCs

Percent of residential care communities that imposed in-person restrictions since January 2020 through March 2021

Select group

Total

Total



SOURCE: National Center for Health Statistics, National Post-acute and Long-term Care Study, 2020

Bar Chart

Data Table

# Example of preliminary data for ADSCs

Number of COVID-19 cases, hospitalizations, and deaths among adult day services center participants and staff since January 2020 through March 2021

Select population

Participant

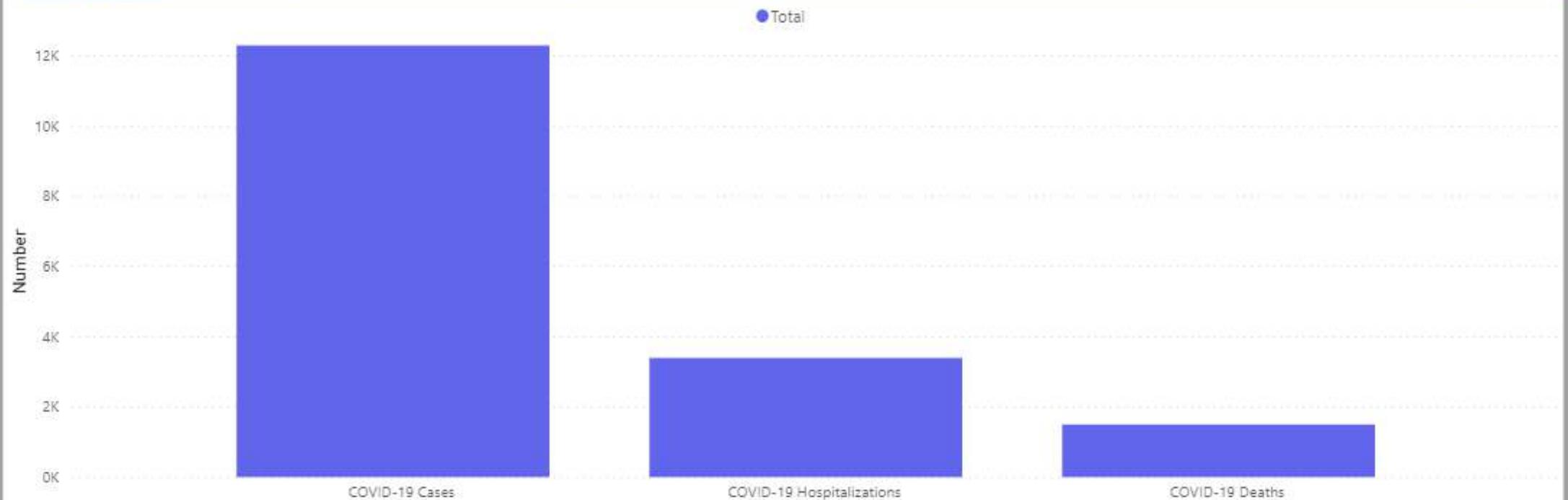


Select group

Total



Participant, Total



**NOTE:** Hover over the bars for COVID-19 Hospitalizations or COVID-19 Deaths to display the percentage of COVID-19 cases that resulted in hospitalization or death.

**SOURCE:** National Center for Health Statistics, National Post-acute and Long-term Care Study, 2020

Bar Chart

Data Table

# Summary: COVID-19 Challenges

- Ensure safety of U.S. Census field representatives and hospital and physician office staff (NAMCS and NHAMCS).
- Minimize burden on already overburdened providers due to COVID-19 (NAMCS, NHAMCS, and NHCS).
- Secure timely OMB approval for COVID-19 and/or related telemedicine questions that were added to all 5 surveys (NAMCS, NHAMCS, NHCS, NEHRS, and NPALS).
- No telework allowed for off-site contractor staff (NEHRS and NPALS).

# Summary: Changes Due to COVID-19

- Delayed start of data collection (NAMCS, NHAMCS, NHCS, NEHRS, and NPALS).
- Moved to primarily CATI administration of Physician and Hospital Induction Interviews (NAMCS and NHAMCS).
- Dropped medical record abstraction of patient visits for physicians, but not for community health centers (NAMCS).
- Switched from in-person abstraction to remote abstraction (NHAMCS).
- Allowed some telework such that preparations for data collections could continue (NEHRS and NPALS).
- Released preliminary data on COVID-19 for selected hospitals (NHCS) and preliminary selected national estimates on COVID-19 related questions (NAMCS physicians and NPALS).

# Lessons Learned

- Prepare for disruptions to data collections and adapt as best you can.
- Add topical questions where possible to gather relevant information on future current crises.
- Develop novel data dissemination methods to provide information in a timely manner.

# Thank you!

## Contact information:

Carol DeFrances  
[csd0@cdc.gov](mailto:csd0@cdc.gov)

Brian Ward  
[ijz8@cdc.gov](mailto:ijz8@cdc.gov)

Manisha Sengupta  
[hku2@cdc.gov](mailto:hku2@cdc.gov)