

2018 National Study of Long-Term Care Providers

Adult Day Services Center (ADSC) Participant Public-Use Data File

August 2021

Data Description and Usage

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Please Read Carefully Before Using NCHS Public Use Survey Data

The National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), conducts statistical and epidemiological activities under the authority granted by the Public Health Service Act (42 U.S.C. § 242k). NCHS survey data are protected by Federal confidentiality laws including Section 308(d) Public Health Service Act [42 U.S.C. 242m(d)] and the Confidential Information Protection and Statistical Efficiency Act or CIPSEA [Pub. L. No. 115-435, 132 Stat. 5529 § 302]. These confidentiality laws state the data collected by NCHS may be used only for statistical reporting and analysis. Any effort to determine the identity of individuals and establishments violates the assurances of confidentiality provided by federal law.

Terms and Conditions

NCHS does all it can to assure that the identity of individuals and establishments cannot be disclosed. All direct identifiers, as well as any characteristics that might lead to identification, are omitted from the dataset. Any intentional identification or disclosure of an individual or establishment violates the assurances of confidentiality given to the providers of the information. Therefore, users will:

1. Use the data in this dataset for statistical reporting and analysis only.
2. Make no attempt to learn the identity of any person or establishment included in these data.
3. Not link this dataset with individually identifiable data from other NCHS or non-NCHS datasets.
4. Not engage in any efforts to assess disclosure methodologies applied to protect individuals and establishments or any research on methods of re-identification of individuals and establishments.

By using these data, you signify your agreement to comply with the above-stated statutorily based requirements.

Sanctions for Violating NCHS Data Use Agreement

Willfully disclosing any information that could identify a person or establishment in any manner to a person or agency not entitled to receive it, shall be guilty of a class E felony and imprisoned for not more than 5 years, or fined not more than \$250,000, or both.

This document describes the data and some of the processes involved in creating the adult day services center (ADSC) participant public-use data file (PUF). NCHS recommends that data users read this document prior to working with the data.

The National Study of Long-Term Care Providers (NSLTCP) was renamed the National Post-acute and Long-term Care Study (NPALS) in January 2020. For the remainder of this document NPALS will be referred to as NSLTCP in order to correctly match the name of the study when the 2018 surveys were fielded.

Data files

The 2018 NSLTCP ADSC PUF data are distributed in two data files: (1) a provider-level data file and (2) services user (participant)-level data file. This document refers to the participant public-use file (PUF). The file contains one record for each sampled participant (participants were not interviewed; interviews were conducted with the directors or caregivers). This file contains participant characteristics, use of services, health status, and cognitive and physical functioning. The provider and participant PUFs cannot be linked using the identifiers provided in these files. The provider ID (SU_FACID) in the provider file is different from the participant file and cannot be matched. This file contains 1255 records and 90 variables. Each record has a primary identifier (PARTICIPANTID). The records in the participant file are sorted in order by the primary identifier.

The PUF data are provided in ASCII format, with fixed-length records. In addition to an ASCII file, separate data files are provided in SAS and STATA formats. PUFs can be downloaded from the NPALS website as separate files. The individual files for separate download are:

Data files	
SAS	ftp://ftp.cdc.gov/pub/HealthStatistics/NCHS/Datasets/NPALS
STATA	ftp://ftp.cdc.gov/pub/HealthStatistics/NCHS/Datasets/NPALS
ASCII	ftp://ftp.cdc.gov/pub/HealthStatistics/NCHS/Datasets/NPALS
Documentation files	
Survey method documentation	https://www.cdc.gov/nchs/data/npals/NSLTCP-2018-survey-methodology-documentation.pdf

Data dictionary	Will be available upon request
Provider Questionnaire	https://www.cdc.gov/nchs/data/nsltcp/2018-NSLTCP-ADSC-Questionnaire-Center.pdf
This document (ReadMe file)	https://www.cdc.gov/nchs/data/npals/NSLTCP-2018-ADSC-Readme-RDC.pdf
Restricted Variables	Will be available upon request

Documentation

This ADSC Readme file is part of the documentation package accompanying the release of the 2018 ADSC participant PUF. The package also includes a data dictionary or codebook, the participant questionnaire, and a list of variables available in the restricted data file. A broader NSLTCP survey methodology document is included in the provider PUF package.

Brief description of survey

The survey on ADSCs was conducted between July 2018 and February 2019. To be eligible for the study, an ADSC must (a) have been licensed or certified by the state specifically to provide adult day services, or accredited by the Commission on Accreditation of Rehabilitation Facilities (CARF), or authorized or otherwise set up to participate in Medicaid (Medicaid state plan, Medicaid waiver, or Medicaid managed care), or part of a Program of All-Inclusive Care for the Elderly (PACE); (b) have had an average daily attendance of one or more participants based on a typical week; and (c) have had one or more participants enrolled at the ADSC at the designated location at the time of the survey. Data were collected by mail, web, and computer-assisted telephone interviews (CATI).

From a frame of 6,361 ADSCs, 1,650 were randomly selected for the survey. Of the 1,650 sampled ADSCs, eligibility could not be determined for 543. Among those cases where eligibility could be determined (1,107), 917 (83%) were eligible and 190 (17%) were ineligible because they did not meet the survey criteria or were out of business. However, 543 ADSCs (33%) could not be contacted; therefore, the final eligibility status of these centers

was unknown. Using the eligibility rate of 83%,¹ a proportion of these centers of unknown eligibility was estimated to be eligible; 450 ADSCs of unknown eligibility were assumed as eligible. The total number of eligible adult day services centers was estimated as 1,367(917 + 450). Of the 1,367 in-scope and presumed in-scope ADSCs, 672 of them completed the provider questionnaire, for a weighted response rate (for differential probabilities of selection) of 50% (this is calculated by using AAPOR's Response Rate 4). To account for ADSCs of unknown eligibility, the weights of the ADSCs with known eligibility were adjusted upward based on the proportion of ADSCs that were actually known to be eligible. Adjustments were also made to account for non-response.

Two participants were randomly selected from eligible ADSCs that agreed to participate. A questionnaire was completed for a total of 1255 participants from 699 ADSC. About 66% of ADSCs completed both provider and at least one participant modules and the rest of the ADSCs either completed the provider module or the participant module. Therefore, not all ADSCs in the provider PUF are represented in the participant PUF and vice versa. Some ADSCs only completed one participant questionnaire. During the weighting process, these participants were moved to a similar ADSC that had user records in the file.

Data dictionary

The 2018 ADSC participant data dictionary or code book for the PUF is provided as a single file containing all variables in the participant PUF. Each variable in the PUF has its own codebook entry.

If a question or a series of questions in the survey were legitimately skipped for selected respondents, then the skipped responses were coded as “-1= INAPPLICABLE” in the data dictionary. The questionnaire skip pattern is specified in the data dictionary beside the question text and code categories. Data users are advised to consult the questionnaire to better understand the questionnaire skip patterns. Missing responses were coded as “-9=MISSING.” The data dictionary will be uploaded later and available upon request (ltcsbfeedback@cdc.gov) until then.

¹ The eligibility rate is calculated by the number of known eligible ADSCs divided by the total number of ADSCs with known eligibility status. ADSCs that were invalid or out of business and centers that screened out as ineligible were classified as known ineligibles.

Participant questionnaire

The Participant Questionnaire is included in the data release package and available at:

<https://www.cdc.gov/nchs/data/nsltcp/2018-NSLTCP-ADSC-Questionnaire-Participant.pdf>

The questionnaire includes all the questions asked in the participant module. There may be some differences in how questions were asked in the questionnaire and how they were coded in the PUF. Also, answers to some questions may not be available in the public-use file. These differences are largely related to efforts to reduce disclosure risk. For instance, the PUF may have fewer response categories (response categories collapsed) than the number of categories indicated in the questionnaire. The variables included in the list of restricted variables are available to users through the NCHS Research Data Center (<http://www.cdc.gov/rdc/index.htm>).

Data processing activities to create the public-use file

The raw data received from the field were reviewed and edited prior to releasing the PUF. Data were reviewed for accuracy, logic, consistency, and completeness. Additionally, extensive disclosure risk review was conducted to prevent the identity of any facilities who participated in the survey from being made known to the public. NCHS staff used various methods to perturb the data to minimize disclosure risk, and then ensured that the perturbation did not affect the estimates. The following methods were employed on the restricted, in-house file to create the PUF:

Item nonresponse and imputed data

Item nonresponse is a source of missing data and occurs if a respondent did not know the answer to a question or refused to answer a question, the interviewer inadvertently skipped a question due to problems relating to CATI or the interview broke off before administering the entire questionnaire. In the data file, item-nonresponse is coded as -9 when a respondent did not provide an answer. NCHS handled item nonresponse for age (10 cases), sex (6 cases), race (55 cases) and ethnicity (14 cases) by imputing using a hot-deck method. Imputed variables are flagged for the data users.

Masked variables

To protect the confidentiality of the information respondents provided, a number of variables have been masked, or simply not included in the PUF. In making these modifications, NCHS staff tried to maintain a balance between the need for data confidentiality and the needs of data users.

1. Direct identifiers are not included in the PUF, such as names, addresses, and geographic information (region, state, metropolitan statistical area). There were other variables that were not included in the PUF. For a full list, see the list of restricted variables document included in the data release package.
2. Provider characteristics variables that are on the provider PUF are not included in the participant PUF (Ownership, Chain).

Modified variables

1. Payment source: The original variable had 9 response categories: Medicaid, Medicare, Older Americans Act, VA, PACE, Other government, Out of pocket, Private insurance, and Other sources. The modified variable on the PUF has 3 categories: Medicaid, Other government; and Out of pocket, Private insurance, and other sources.
2. Other categorical variables collapsed into fewer categories: Some categorical variables were collapsed into fewer response categories. These included LIVENOW2, LIVEWITH, MEMORY2, SIGHT2, HEARING2, STAIRS2, SELFCARE2, COMMUNICAT2, NUMDAYS2, SYMPTOMS2.
3. Race of resident (RACEETH2): American Indians and Alaska Natives, Hawaiian or other Pacific Islanders, and multiple race residents were collapsed into an “other race” category in the public use file.
4. Length of stay in facility (LOSRC): Instead of including the exact date when a sampled resident moved into a facility, a categorical length of stay variable was provided.

Top/bottom coded variables

For some variables, upper and lower values were recoded for confidentiality purposes (top- or bottom- coded). Upper or lower cut-off points were used and values above the upper limit or below the lower limit included in the top and bottom categories. These included AGE and CHARGES.

Additional case-specific modifications

1. Participant's with colostomies and indwelling catheters were recoded as missing for the incontinence variable in order to protect their identify (INCONT2).
2. Participants who were enrolled in an ADSC for less than 3 months were recoded as missing for hospital emergency visits (HOSPEMER12) and overnight hospital stays (HOSPNITE12) in order to protect their identity.

Reliability of estimates

Estimates published by NCHS must meet reliability criteria based on the relative standard error (RSE or coefficient of variation) of the estimate and on the number of sampled records on which the estimate is based. Proportion estimates are not presented or are flagged based on the procedure specified in "National Center for Health Statistics Data Presentation Standards for Proportions," available from: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf. For all estimates other than estimates of proportions in the tables: estimates are not presented if they are based on fewer than 30 cases in the sample data, in which case only an asterisk (*) appears. Estimates based on 30 or more cases include an asterisk if the relative standard error of the estimate exceeds 30%.

The data collected in the 2018 NSLTCP were obtained through a complex, multistage sample design that involves stratification and clustering. The final weights provided for analytic purposes have been adjusted in several ways to yield valid national estimates for adult day services centers in the U.S. Users are reminded that the use of standard statistical procedures that are based on the assumption that data are generated via simple random sampling (SRS) generally will produce incorrect estimates of variances and standard errors when used to analyze data from the NSLTCP provider PUF. The clustering protocols that are used in the multistage

selection of the NSLTCP sample require other analytic procedures, as described below. Users who apply SRS techniques to the data generally will produce standard error estimates that are, on average, too small, and are likely to produce results that are subject to excessive Type I error.

In this document, examples of SUDAAN computer code are provided for illustrative purposes. Examples are provided also for the SAS and STATA software packages. However, the appropriate application of these procedures is the ultimate responsibility of users. NCHS strongly recommends that NSLTCP data analyzed under the direction of or in consultation with a statistician who is cognizant of sampling methodologies and techniques for the analysis of complex survey data. The ADSC provider PUF includes design variables that designate each record's stratum marker and the first-stage unit (or cluster) to which the record belongs. Examples follow for using these design variables with SUDAAN, STATA, and SAS survey procedures.

Table 1a. Computations using SUDAAN

PROC statement	NEST statement	TOTCNT statement	WEIGHT statement
PROC x FILE = y DESIGN = WOR;	NEST PUFSTRATA2;	TOTCNT PUFPOPFAC2; POPSU	WEIGHT SUWT;

Table 1b. Computations using STATA

Design description in STATA
svyset su_facid, strata(pufstrata2) fpc(pufpopfac2) vce(linearized) singleunit(missing) ParticipantID, fpc (popsu) weight (suwt)

Table1c. Computations using SAS

PROC	STRATA	CLUSTER	WEIGHT
PROC SURVEY_ DATA = Y TOTAL = SECONDFILE;	STRATA PUFSTRATA2;	CLUSTER SU_FACID;	WEIGHT SUWT;

Obtaining the data

The ADSC 2018 provider PUF is available free of charge to users and analysts and can be downloaded from the NSLTCP web site. There are a few conditions or restrictions for data use, and they include:

1. Use the data in this dataset for statistical reporting and analysis only.
2. Make no use of the identity of any person or establishment discovered inadvertently and advise the Director, NCHS, of any such discovery.
3. Report apparent errors in the ADSC provider data or documentation files to the Long-Term Care Statistics Branch (LTCSB).

We also request the user inform LTCSB of any publications or presentations produced based on the 2018 NSLTCP data and cite relevant NSLTCP documentations/ data products in their work when appropriate.

Contact information

For questions, suggestions, or comments concerning NSLTCP data, please contact the LTCSB at:

Long-Term Care Statistics Branch (LTCSB), NCHS,

3311 Toledo Road, Hyattsville, MD 20782

E-mail: lcsbfeedback@cdc.gov

Phone: 301-458-4747.