2025 NATIONAL POST-ACUTE AND LONG-TERM CARE STUDY

ADULT DAY SERVICES CENTER PROVIDER RESTRICTED DATA FILE DATA DESCRIPTION AND USAGE

Division of Health Care Statistics

National Center for Health Statistics

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Contact Information

Data users can find the latest information about NPALS on the website, at: https://www.cdc.gov/nchs/npals/index.html. For questions, suggestions, or comments concerning NPALS data, please contact the Data Analytics and Production Branch, Division of Health Care Statistics at:

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Obtaining the Data

The 2025 NPALS restricted ADSC provider data file can be accessed through NCHS' research data center (RDC): https://www.cdc.gov/rdc/. In addition to the RDC procedures for restricted data file access, the above terms and conditions also apply.

We appreciate users informing DHCS of any publications or presentations based on the 2025 NPALS data and cite relevant NPALS documentations/data products in their work when appropriate.

Adult Day Services Center Provider Restricted Data File Data

Description and Usage

In the following sections of the document, the introduction describes the objectives of the 2025 National Post-acute and Long-term Care Study (NPALS) and the README document for the adult day services center (ADSC) component of NPALS. Section two describes data files and related documentation. Section three describes data processing activities used to create the restricted data file, and section four briefly describes reliability of estimates.

Section 1 Introduction

The 2025 NPALS (renamed in 2020 from the National Study of Long-Term Care Providers, or NSLTCP) is designed to provide national and state representative statistical information about the supply and use of long-term care services providers in the United States. The main goals of NPALS are to: (1) estimate the supply of paid, regulated long-term care services providers, (2) estimate key policy-relevant characteristics and practices of these providers, (3) estimate the number of long-term care services users, (4) estimate key policy-relevant characteristics of long-term care services users, (5) produce national and state estimates, where feasible, within confidentiality and reliability standards, (6) compare across provider sectors, and (7) monitor trends over time. Data collection was conducted from November 2024 through July 2025. For convenience and because most of the data collection activities occurred in 2025, this wave is referred to as 2025 NPALS. This README document is for the ADSC file and describes steps taken to prepare the restricted provider file.

Section 2 Data Files

The 2025 NPALS ADSC restricted data are at the provider level only. This section describes the ADSC provider data file, which has one record for each eligible ADSC that completed a provider questionnaire. The data file contains characteristics about ADSCs, services they provided, types of staff employed and contracted, and aggregate participant characteristics. The ADSC provider data file contains 1,149 records and 287 variables. Each record in the ADSC data file has a primary identifier (CASEID). The 2025 NPALS ADSC data are provided in SAS, Stata, and R data formats.

Section 2.1 Documentation

There are several types of documentation available for use with the data file. These include the survey methodology documentation that provides a brief overview of the survey, the data collection procedures, and the sampling design; the survey questionnaires; and this provider-specific data description and usage, or README, document available on the website: https://www.cdc.gov/nchs/npals/questionnaires/index.html.

Section 2.2 Brief Description of Survey

The survey on ADSCs was conducted between November 2024 and July 2025. 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) and (b) have had one or more participants enrolled at the ADSC at the designated location at the time of the survey. Data were collected through Mail and Web questionnaires. Computer-assisted telephone interview (CATI) was not used in this wave but prompting calls were made towards the end of the survey period to selected ADSCs to complete the Web or Mail questionnaire.

All 4,448 ADSCs in the final sampling frame were included in the study. Of the 4,448 ADSCs included in the study, eligibility could not be determined for 2,920 ADSCs. Among those cases eligibility could be determined (1,528), 1,149 (about 75%) were eligible and 379 (about 25%) were ineligible because they did not meet the survey criteria or were out of business. However, 2,920 (65.6%) ADSCs could not be contacted; therefore, the final eligibility status of these centers was unknown. Using the eligibility rate of 75%[1], a proportion of ADSCs of unknown eligibility was estimated to be eligible; hence, 2,196 ADSCs of unknown eligibility were presumed to be eligible. The total number of eligible ADSCs (in-scope and estimated in-scope) was, therefore, estimated to be 3,345 (1,149 + 2,196) (Table 1). Of the 3,345 in-scope and presumed in-scope ADSCs, 1,149 ADSCs completed the provider questionnaire, for a response rate of 34.4% (this is calculated by using AAPOR's Response Rate 4) [1]. 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 known to be eligible. Adjustments were also made to account for nonresponse. In 2025, the estimated national number of ADSCs is 3,289, serving

[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.

an estimated 227,169 participants.

Table 1. Adult day services centers frame, response, and eligibility counts

Setting	Frame	Sample	Responded eligible	Responded ineligible	Total responded	Estimated eligible number of ADSCs from ADSCs of unknown eligibility	Estimated eligible + responded eligible
ADSCs	4,448	4,448	1,149	379	1,528	2,196	3,345

Section 2.3 Data Dictionary

The 2025 ADSC data dictionary (codebook) is provided as a single file. Each variable in the data file has its own entry in the data dictionary. Please note that some variables may not be available through RDC due to confidentiality and disclosure risk. A derived or transformed version of these variables may be available, where applicable.

If a question or a series of questions in the survey were legitimately skipped for selected respondents, then the skipped responses are 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 are coded as "-9=Not ascertained." The 2025 NPALS ADSC data dictionary is available on the website: https://www.cdc.gov/nchs/npals/questionnaires/index.html.

Section 2.4 Provider Questionnaire

The ADSC provider questionnaire is included in the data release package and available on the website: https://www.cdc.gov/nchs/media/pdfs/2024/11/NPALS-ADSC-2024-quest-508.pdf. The questionnaire includes all the questions asked during the survey along with the skip patterns for selected questions. There may be some differences in how questions were asked in the survey and how they are coded in the restricted file. For example, the questionnaire uses "mark all that apply" in questions that ask about different services that ADSCs provide (Question 15a-l). Respondents indicated as many as two different ways that the center provided a given service, or if it is not provided. In the data file, for each service question, binary variables were included: three separate variables corresponding to three different ways that ADSCs provide the service: 1) by paid center employees or by arranging for the service to be provided by outside service providers, 2) refers participants or family to outside service providers; and 3) does not provide, arrange, or refer for this service. In addition to these three binary variables, a derived variable with three mutually exclusive response categories is included in the data file for each service. These derived variables (with collapsed categories) indicate if the center provides the service: 1) by paid center employees/by arranging for the service to be provided by outside services providers, 2) only by referral, and 3) does not provide, arrange, or refer for the service.

The questionnaires have changed slightly over the survey years. Therefore, for data users interested in multiple years of date, the previous questionnaires are available on the website: https://www.cdc.gov/nchs/npals/questionnaires/index.html

Section 3 Data Processing Activities to Create the Restricted Data File

The raw data received from the field were reviewed and edited prior to releasing the restricted data file through NCHS' Research Data Center (RDC). Data were reviewed for accuracy, integrity, logical consistency, and completeness.

Section 3.1 Consistency Checks and Data Edits

1. To ensure internal consistency of the data, for some questions, edit checks were programmed into the Web questionnaire and applied during data collection. These edits were programmed based on the expected range of responses for given questions and the logical consistency between questions. For instance, the Web questionnaire prompted respondents to verify if the total number of male and female participants provided by the respondent was accurate when the sum of male and female participants did not add to the total number of participants reported in an earlier question.
2. The variables for sex, race-ethnicity, and age distribution of participants were edited if the values did not add to the total number of participants (Question 3). For example, when values for the age breakdown of an ADSC (Question 16) did not equal the total number of participants currently enrolled, values were adjusted to sum to the total number of participants currently enrolled based on the proportion of values reported for different age categories for the case.
3. When a case was missing a response for ownership status (Question 1) in the survey data file but had a value for ownership in the sampling frame, the missing value on the survey data file was recoded to the value of ownership on the sampling frame.

4. In most cases, the same skip logic that was applied to the Web questionnaire was used to edit the data file when the skip instruction was not followed by a respondent to the Mail questionnaire.

Section 3.2 Changes in Data Because of Respondent Comments

The NPALS Web provider questionnaire allowed respondents to enter comments by clicking an icon provided for each question on each screen. For hard-copy questionnaires, keyers entered any notes respondents wrote in the margins or in response boxes as they keyed the data. These comments were compiled and reviewed. The original response was changed if it was determined that the comment changed the substance of the recorded answer.

Section 3.3 Edited/Derived Variables

1. Number of full-time and part-time employees, by staff type (Question 27a-e)

Number of full-time and part-time employees for a given staff type were edited to address cases with missing data. Instructions were provided in the questionnaire to enter "0" if the ADSC had no employees for a given staff type. Yet, there were cases where respondents indicated the number of staff in the response box only when specific staff categories were applicable, while leaving inapplicable response boxes blank. Therefore, when editing full-time/part-time staffing variables, blank responses were coded as "0" unless responses to all ten response boxes for all employee staff type were blank or missing (i.e., responses were blank for all employee staff types). Otherwise, if all response boxes were missing then staffing categories were kept as missing (-9) because it could not be reasonably determined whether it

is truly missing or the respondent meant "0" for each staff type. This coding scheme was similar to the scheme used in 2016, 2018, 2020, and 2022 but different from the coding scheme used in 2014.

2. Full-time equivalent (FTE) employees – RNFTE1recode, LPNFTE1recode, AIDEFTE1recode, SOCWFTE1recode, ACTFTE1recode

Number of full-time and part-time employees for a given staff type were converted to number of full-time equivalents (FTEs) with an assumption that full-time is 1 FTE and part-time is 0.5 FTE. For example, an ADSC with 3 full-time aide employees and 4 part-time aide employees would be considered to have 5 FTE aides.

Outliers for the FTE variables were defined as values that are 2 standard deviations above or below the size-specific mean for a given staff type, where size was defined as the number of participants served based on average daily attendance categorized (1= 1-25 participants, 2=26-100 participants, 3=101 or more participants). Outliers were replaced by size-specific mean. When calculating the size-specific mean for a given staff type, cases were coded as missing if a) the number of FTE registered nurse employees/contract staff was greater than 999, b) the number of FTE licensed practical/vocational nurse employees was greater than 999, c) the number of FTE personal care aide employees was greater than 999, d) the number of FTE social work employees was greater than 99, and e) the number of FTE activities employees was greater than 99.

3. Hours per participant per day, by employee staff type – RNHPPD, LPNHPPD, AIDEHPPD, SOCWHPPD, and ACTHPPD

a. Hours per participant per day were derived from the number of full-time equivalents for each type of staff and average number of daily attendance variables (Question 3).

b. The number of FTEs for a given employee staff type was converted into hours by multiplying the FTEs by the average number of hours in a work week (based on a 35-hour work week) and dividing the total number of hours per staff type by the average daily attendance at the center and by the number of days in a work week (5 days). When values of derived hours per participant per day were greater than 24, these values were capped at 24.

4. Any employees, by staff type – ANYRN_EMP, ANYLPN_EMP, ANYAIDE_EMP, ANYSOCW_EMP, and ANYACT_EMP

a. These variables were derived from the FTE variables for employees (e.g., RNFTE1recode to derive ANYRN_EMP) indicating whether the adult day services center had any RNs who are employees.

5. Electronic health records systems to exchange information with other providers

Having a computerized system that supports electronic health information exchange with any of the following providers or settings (ANYEX) was derived from the types of exchanges listed in Question 10a-e: physicians (ITMDrc), pharmacies (ITPHARMrc), hospitals (ITHOSPrc), nursing homes (ITNHrc), or other long-term care establishments (ITLTCOTHrc). The ANYEX variable was derived to indicate whether the ADSC's electronic health records system supported electronic information exchange with any of the five entities in Question 10.

6. Revenue source variables

Revenue source variables (Question 8a-h) were also edited if the values reported for different

revenue source categories did not add to 100%. For example, when a case had missing data for a given revenue source category, then the mean of five imputed values for that specific case was used to assess if values of the revenue source categories summed to 100%. When values did not add up to 100%, values were adjusted to sum to 100% based on the proportion of values reported for different revenue source categories for the case.

In addition to the above recoded/derived variables, several other variables were also recoded. Recoded variables end with 'rc' to indicate that the original variable was recoded (for instance, ITMDrc, ITHOSPrc etc.). In some cases, variables were derived from several other variables, and the derived variables do not have 'rc' suffix. For instance, SERVHOSPR, SERVSOCWR, SERVMHR (and all other service variables) were created from the respective individual binary variables. As an example, SERVHOSP1, SERVHOSP3, and SERVHOSP4 were used to create SERVHOSPR as described in previous sections. Consult the data dictionary and other documentation for additional information on recoded or derived variables.

Section 3.4 Item Nonresponse

Item nonresponse is a source of missing data that occurred when a respondent did not know the answer to a question or refused to answer a question; or if the respondent submitted the questionnaire before answering all the questions. In the data file, item nonresponse or missing is coded as "-9= Not ascertained". Weighted nonresponse ranged from 0.98% for the CHAIN variable (Question 6) to 19.2% for the osteoporosis (DXOSTEO) variable (Question 19k).

Section 3.5 Imputed Data

Missing values for demographic variables age (Question 16a-d), race-ethnicity (Question 17a-j), sex (Question 18), revenue source variables (Question 8a-h), and two activities of daily living (ADL) variables – eating (25b) and bathing (25d) – were imputed.

After the weights were finalized, multiple imputations were created using the Cox-Iannacchione Weighted Sequential Hot Deck (WSHD) procedure in SUDAAN. For the WSHD procedure in SUDAAN the variables used in the imputation procedure, referred to as the imputation class variables, must be specified. Within the cross of the imputation class variables, all responding and non-responding records for a given variable were identified. The responding records were potential donors for non-responding (missing) records. In other words, respondents were selected sequentially from within the cross of the imputation class variables and became donors for missing records within that same cross of variables.

For imputing demographic variables, revenue variables, and two ADL variables with missing cases, class variables specified for the imputation procedure included: state (FIPS), maximum number of participants allowed (MAXPART), ownership type (OWNERSHP), chain affiliation (CHAIN), Medicaid paying for long-term care services (MEDPAID), and metropolitan statistical area status (MSA). Cases with missing data were recoded as the mean of five imputed values for that specific case and cases with no missing data kept the value as respondents reported. The imputed revenue, race-ethnicity, age, sex, and ADL variables (eating and bathing) have 'rc' suffixed to the original variable name (e.g., FEMALErc, HISPANICrc, REVMCAIDrc, AG64LESSrc).

Additionally, a second version of the revenue variables is provided where the imputation class variables were slightly altered by adding MEDICAID and dropping MEDPAID. The second set of imputed revenue variables are indicated with '2rc' suffix (e.g., REVMCAID2rc, REVMCARE2rc).

A flagging variable is also included to indicate cases imputed for the variable (e.g., AG64LESS_IMPFLG, FEMALE_IMPFLG, REVMCAID_IMPFLG). The percentage of imputed records ranged from 3.3% (38 missing responses) for the REVMCAIDrc variable (Question 8a) to 13.1% (150 missing responses) for the bathing (BATHHELPrc) variable (Question 25d).

Section 4 Reliability of Estimates

Estimates published by NCHS must meet reliability criteria. Proportion estimates that do not meet the reliability criteria are not presented or are flagged based on the procedure specified in "National Center for Health Statistics Data Presentation Standards for Proportions," available on the website: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf. For totals and rates, reliability is determined by "National Center for Health Statistics Data Presentation Standards for Rates and Counts," available on the website: https://www.cdc.gov/nchs/data/series/sr_02/sr02-200.pdf. For example, for rates with sampling variability, if nominal or effective sample size in the numerator or denominator is less than 10, the estimate is suppressed. Similarly, if an estimated rate has a relative confidence width greater than 160%, the estimate is suppressed.

The ADSC data collected in the 2025 NPALS were obtained through a census of all ADSCs. However, although a census was attempted, the ADSC estimates were subject to variability due to nonresponse. Thus, variability associated with the nonresponse needs to be treated as if it were from a stratified (by state) sample without replacement. The final weights provided for analytic purposes have been adjusted in several ways to yield valid national estimates for ADSCs in the United States. These weights adjust for nonresponse and unknown eligibility in the survey.

In this document, examples of SUDAAN, Stata, SAS, and R specifications of analysis codes are provided for illustrative purposes (Tables 2a-2d). However, the appropriate application of these procedures and choice of analysis program are the ultimate responsibility of users. NCHS

strongly recommends that NPALS data be 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 file includes design variables that designate each record's stratum marker and the first-stage unit (or cluster) to which the record belongs. Examples for using these design variables with SUDAAN, Stata, SAS, and R survey procedures are provided below.

Table 2a. Computations using SUDAAN

PROC statement	NEST statement	TOTCNT statement	WEIGHT statement
PROC x FILE = y DESIGN = WOR;	NEST STRATAn;	TOTCNT POPFACn;	WEIGHT FACWTn;

Table 2b. Computations using STATA

Design description in STATA
svyset CASEID [pweight=FACWTn], strata(STRATAn) fpc(POPFACn) vce(linearized) singleunit(missing)

Table2c. Computations using SAS

PROC	STRATA	CLUSTER	WEIGHT
PROC SURVEY_ DATA = Y TOTAL = SECONDFILE;	STRATA STRATAn;	CLUSTER CASEID;	WEIGHT FACWTn;

Table 2d. Computations using R

Create design object:
design_object <- svydesign(id=~CASEID, weights=~FACWTn, strata=~STRATAn, nest=TRUE, fpc=~POPFACn, data = Y)
Package: "survey" svymean(~VARIABLE, design)
Package: "surveytable" set_survey(design, mode = "NCHS")

Preferred Reporting Items for Complex Sample Survey Analysis (PRICSSA)

The table below provides Preferred Reporting Items for Complex Survey Analysis (PRICSSA) [2] for users of the 2025 NPALS adult day services centers (ADSC) restricted use data file. This information may be helpful to users when analyzing the 2025 NPALS survey data.

Table 3. Preferred Reporting Items for Complex Sample Survey Analysis

Preferred Reporting Items for Complex Sample Survey Analysis (PRICSSA)	Description
Name of survey	National Post-acute and Long-term Care Study Adult Day Services Centers Component Provider File
Data collection mode	Mail and Web
Target population	Adult Day Services Centers in the United States
Populations excluded	None
Variance and standard error estimation	Taylor Series Linearization
Sample design	Census
Weight	FACWTn
Design variable: Stratum	STRATAn
Design variable: population correction factor	POPFACn
Presentation standards	Proportions or percentages: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf Rates and counts: https://www.cdc.gov/nchs/data/series/sr_02/sr02-200.pdf
Unweighted total sample size	1,149 ADSCs
Weighted total number of eligible ADSCs	3,289
Weighted total current participants	227,169
Response rate (weighted)	34.4%
Location of example code	See Table 2 (a-d) above for approaches in various statistical software.

Section 5 References

1. American Association for Public Opinion Research. 2023 Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 10th edition. AAPOR.
2. Seidenberg AB, Moser RP, West BT. Preferred Reporting Items for Complex Sample Survey Analysis (PRICSSA). J Surv Stat Methodol. 2023 Apr 26; 743-757.