RAPIDS USER GUIDE

Instructions for working with the

"**R**eport **A**nd **P**lacement **I**ntegrated **D**ata **S**ystem"

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ABSTRACT

Researchers at Washington University - St. Louis, the Kempe Center at the University of Colorado Anschutz Medical Campus, and the University of Illinois were awarded a grant in 2023 by the Administration for Children and Families to: (1) improve the usability of national child maltreatment datasets and (2) conduct original research on child maltreatment using secondary data. The centerpiece of this effort is the Report and Placement Integrated Data System (RAPIDS), which combines national child welfare hotline report records from the National Child Abuse and Neglect Data System (NCANDS, or the "Child File") with foster care records from Adoption and Foster Care Analysis and Reporting System (AFCARS, or the "Foster Care File"). RAPIDS allows interested researchers to combine yearly Child File and Foster Care Files and place them in a single longitudinally structured dataset, ready for analysis. RAPIDS includes additional features to support analysis, such as: a family-level ID variable (our estimate of which family children belong to), county-level characteristics variables from external sources (e.g. Census), and the ability to join policy data. The most important data restructuring done in RAPIDS involves changing Foster Care File from "one record per year per child" to "one record per foster care stay per child." The final program, along with supporting codebooks and other materials, will be available to the public in Spring 2024. Interested researchers must obtain restricted use AFCARS and NCANDS data from the National Data Archive for Child Abuse and Neglect before they can use the RAPIDS programs.

Section 1.a: INTRODUCTION

1. Background and Purpose

Child welfare administrative data have been used in research for more than half a century, with an excellent early example being Helen Jeter's (1963) pioneering work with the Children's Bureau. The "modern" period of child welfare administrative data research began with increases in computing power in the 1980's, which increased researchers' ability to utilize local and state data files in research projects (Eckenrode, Powers, Doris, Munsch & Bolger, 1988). Data storage cost and processing speeds made the analysis of larger (national) datasets impractical for most researchers until the early 2000's. At that time, increasingly complete data from the National Child Abuse and Neglect Data System (NCANDS, or the "Child File") and the Adoption and Foster Care Analysis and Reporting System (AFCARS, or the "Foster Care File") became generally available. From the mid-2000s forward, there has been a rapid and still accelerating use of both state data and national (NCANDS and AFCARS) data.

National data, particularly NCANDS and AFCARS, have several strengths for studying questions related to child maltreatment and child protective services. The first, of course, is their national scope. Policy questions are often asked at the national level, requiring individual-level and complete information from all states. Only NCANDS/AFCARS data can be used for that purpose. Another key strength of NCANDS/AFCARS is that their de-identified nature makes them fairly simple for researchers to obtain data access from the National Data Archive on Child Abuse and Neglect (NDACAN) and radically reduces confidentiality concerns. This de-identification, however, also causes a series of serious weaknesses, including rounding of time variables, a lack of granular geographic identifiers below the county (and sometimes state) level, and a prohibition on linking of fatality records. Finally, another strength is the extensive NCANDS and AFCARS timeframes, allowing for strong prospective studies (e.g., studies on recurrence with multiyear follow-up periods) and studies looking at trends over time (e.g., studies on how child maltreatment (CM) rates change over many years or even months in combination with other factors). Long timeframe studies also allow methods such as "difference in difference" approaches to be used in understanding policy changes or effects of external factors (e.g. changes in tax policy) on CM rates.

Despite these strengths, the use of NCANDS/AFCARS data has been limited due to the challenges in linking data to other datasets (due to de-identification) and the difficulty of longitudinal data integration between NCANDS and AFCARS. While matching to external datasets at the individual level is not possible at this time for NCANDS/AFCARS, geographic-level linkage to other datasets is possible cross-sectionally and longitudinally at the state and county level. RAPIDS provides within-race, county-level geographic data linked to individual records. By "within-race", we mean "population, income or other indicators pertaining only to a particular race within a county". For example, the median household income in a county might be $45K, but White people in the county average $54K and Asians average $56K. Then, for White children, their "within race" median household county income would be $54K, while for Asian children, it would be $56K. (See Jones et al. 2023 for more detail and mathematical justification).

Longitudinal integration of NCANDS and AFCARS has been another significant challenge for most researchers. The unusual "year-end description" data structure of AFCARS makes it straightforward to combine with NCANDS cross-sectionally in a given year, and this has been done. However, no studies of which we are aware combine these two datasets over long periods of time except for a recent study by authors from this team (Drake, Fluke, Kim, Orsi & Stubblefield, 2021). The lack of ability to conduct longitudinal studies spanning both the NCANDS and AFCARS leads to a substantial gap in the child welfare literature. The primary problem facing researchers stems from the year-end record nature of the AFCARS data. The NCANDS yearly data are much more straightforward, with one record per child per event (i.e. "child-report"). These data can be easily "stacked" by combining multiple years after removing duplicate records of the same event. The AFCARS yearly data are end-of-year status records, one per child per year. A child with one out-of-home episode (meaning "from entry into care until exit," not "each placement within an episode") within a federal fiscal year (FFY) gets one record. However, a child with two or more episodes within a FFY also gets only one record. A child who entered foster care, stayed in care without exiting, or exited gets one record. For clarification and examples, you can review the AFCARS User's Guide, available at NCANDS at (https://www.ndacan.acf.hhs.gov/datasets/pdfs_user_guides/afcars-userguide-2000-present.pdf), especially Figure 1 on Page 10. Using AFCARS variables that capture current and prior entries and exits (e.g. LATREMDT, DODFCDT) while simultaneously considering these variables across multiple years of AFCARS files, it is possible to transform the AFCARS data into a format of "one record per child per

episode in care." Creating "child/event" data across linked NCANDS and the AFCARS files is the single most important step we can take to allow longitudinal research to be conducted on the child welfare system as a whole. The primary purpose of RAPIDS is to achieve this integration.

2. Required datasets to run RAPIDS

RAPIDS links national records of child maltreatment reports (screened-in reports) from 2002 to 2021 with foster care records from 2005 to 2021 (with Foster Care File data beginning in 2005). The user may also add files for 2022 and onward by slightly modifying the code. The programs require as input: (1) annual NCANDS Child Files (containing child/report-level records of all CM reports in the US) from 2002-2021 and (2) the "annual" AFCARS Foster Care Files from 2005 to 2021. ("Six-month" AFCARS files are also available, but these are not used by RAPIDS, because they would limit the longitudinal timeframe available). AFCARS files contain child-level records as of September 30th of each year, with some variables relating to the current foster care spell and other variables relating to a previous foster care spell. All of the NCANDS Child Files and AFCARS Foster Care Files are restricted to authorized users (see "Getting Started" below). All investigators on a research team using RAPIDS must be named on a restricted data use agreement with the National Data Archive for Child Abuse and Neglect. You will need ACS (Census) data to run the Census components of RAPIDS. These are included in the downloads packet.

3. Required computing power to run RAPIDS

A computer with at least 32 GB RAM and SAS installed is highly recommended to run RAPIDS. Additionally, at least 4 TB of storage in a secure environment is required for: (1) storage of NCANDS and AFCARS datasets across all years, (2) temporary working storage for SAS, and (3) the completed RAPIDS file. The speed at which the program runs will depend on the RAM size and the clock speed of your computer's processor. On a desktop with 32GB RAM and a processor clock speed of 3.90 GHz, the I1 integration program took approximately 4.5 hours to run successfully. Please note: the RAPIDS program does not use parallel processing, so having more processors will not run the program more quickly. Additional challenges are presented by remote work, which may require data to pass through a VPN or similar security protocols. One successful strategy has been to use a powerful desktop in a locked office on campus that is connected to a University Local Area Network and use remote-access software to send commands for processing RAPIDS from the user's typical laptop to the LAN-connected desktop.
Troubleshooting: SAS may generate various errors if memory availability is not adequate. "Insufficient memory" is about RAM. This can sometimes be fixed by following the instructions in the "SAS Memsize Change.docx" file attached. "No disk space available" is about disk space, not RAM. We have resolved this issue by using a dedicated 2TB drive, which never holds permanent datasets, but is only used to give SAS a dedicated large working memory. If doing this, programs must be prefaced with this code: `data _null_; c=dlgcdir("E:"); put rc=; run;` This code example points SAS to the location "E:" when it wants to use working memory. You will have to modify these characters ("E:") to represent the location of the drive you wish to use for working memory.

4. RAPIDS variants

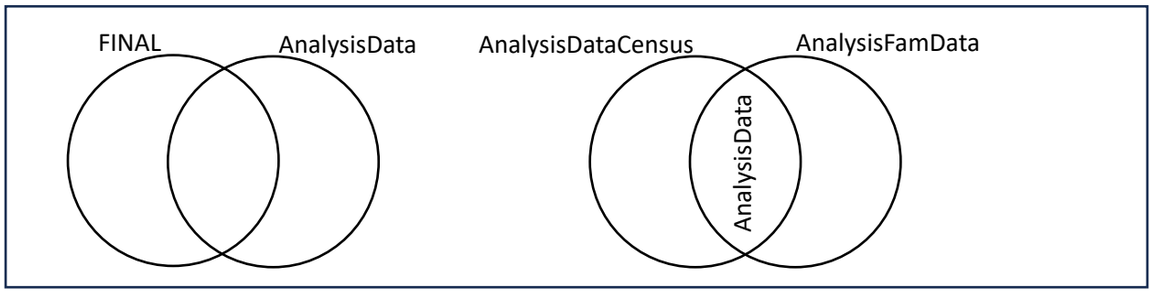
For users with powerful hardware, the RAPIDS programs offer several add-ons to enhance the basic national individual-level CM data by integrating records from multiple sources. These include: (1) creating a wider, analysis-ready dataset that includes new variables for prior and subsequent child welfare involvement events; (2) adding Census county-level variables based on residential counties at the time of event; (3) augmenting family data with variables on each child's siblings, such as demographic characteristics and current/prior event variables specific to the siblings. These features collectively contribute to a comprehensive and versatile set of tools for researchers and analysts working with child welfare and foster care data.

To achieve this, several RAPIDS programs generate distinct RAPIDS datasets:

- The 'RAPIDS_I1_IntegrationProgram.sas' program produces the 'FINAL' dataset.
- The 'RAPIDS_I2_AnalysisData.sas' program generates the 'AnalysisData' dataset.
- The 'RAPIDS_I3_CensusAddOn.sas' program creates the 'AnalysisDataCensus' dataset.
- Additionally, the 'RAPIDS_I4_FamID.sas' and 'RAPIDS_I5_AnalysisFamData.sas' programs collectively yield the 'AnalysisFamData' dataset.

While the number of cases remains consistent across all datasets, the variables available differ. The Venn diagrams below illustrate commonalities and unique variables among the datasets. Both 'FINAL' and 'AnalysisData' datasets share common variables, yet each dataset contains distinct variables. Notably, all

variables in ‘AnalysisData’ are present in ‘AnalysisDataCensus’ and ‘AnalysisFamData’. ‘AnalysisDataCensus’ further furnishes county-level census variables, while 'AnalysisFamData' further offers variables derived from sibling records.



To make accessing variables across multiple datasets easier, the ‘RAPIDS_I6_SplitColumns.sas’ program separates unique columns from all datasets into individual files. This feature allows you to load specific variables without needing to load entire datasets. To do so: 1) create a dedicated folder on your computer where the program can store the separate data and 2) run the program that will populate the folder with individual files for each variable, **keeping the order of observations consistent across all datasets.** Using this setup, extracting each variable as a unique data file takes about ten seconds per variable, compared to hours when loading entire datasets. The consistent order of observations acts as an implied “linkage key,” so you must not sort using metadata or observation IDs. For an example of how to extract data using this method, refer to the attached ‘ExampleProgram.sas.’ (This optional I6 program serves as a convenience feature that simulates selecting desired columns from a database because loading and extracting variables from the full datasets is time-consuming.)

5. Dates available in RAPIDS

RAPIDS (as of March 2024) merges FFY 2002-2021 NCANDS data and FY2005-2021 AFCARS data. AFCARS data are only linked from 2005 forward as capabilities for cross dataset linkage (Child File and AFCARS) is only available from that date forward. Each fiscal year (FY) file (for both NCANDS and AFCARS) is input separately with their own line of code. If processing time or capacity is a concern, users can simply change which years to input by editing the respective lines in the code. Users can search IntegrationProgram.sas for the string “TODO” to locate sections where the code can be modified to import specific combinations of NCANDS and AFCARS years. See Appendix A for instructions on how to remove or add years.

6. States available in RAPIDS

RAPIDS data are available on all states reported to NDACAN. For most time periods, this includes all states. However, there are two issues to be aware of. First, some states do not provide data for certain years. Data from these state-years will simply not be available in RAPIDS. Second, on occasion, and more commonly in the past, some states do not have data that are “linkable” year to year (i.e. their child identifiers may not correspond across years). Discontinuities in the linkage ability of data are shown in Appendix B. Researchers conducting longitudinal studies requiring individual-level analysis over time should only include state-years with continuous, linkable data (“indicated as 1”) in the datasets being used. For example, if a researcher wanted to use data since 2010, all AFCARS data are linkable through those years, but ten states do not have continuous Child File data and would need to be excluded.

7. Unit(s) of Analysis

The unit of analysis in RAPIDS is a child-event episode. Each observation (or row) in the compiled RAPIDS dataset represents one episode. The variables described in Section 2 that have the prefix **C_** describe characteristics of a child-report episode (from the Child File). The variables described in Section 3 that have the prefix **F1_** or **F2_** describe characteristics of a child-foster care episode (from the Foster Care File). See sections 2 and 3 below for more detail.

The RAPIDS programs additionally provide national county-level longitudinal data from 2007 to 2019. The unit of analysis for this dataset is a county-year.

8. Sample (actually, it’s not a sample; it’s a census, as all possible observations are included)

National Individual-Level Longitudinal Data. The compiled RAPIDS dataset includes all US children who have been reported to a public child protective services agency and/or placed in foster care. “Report” means that a call was made to a hotline or local child protection agency and that the relevant agency

screened in the call and responded. RAPIDS data include all investigated child maltreatment report records from FY2002-2021 (from NCANDS) and all foster care placement records from FY2006-2021 (from AFCARS). For each child, report records and foster care records are longitudinally linked starting from October 1, 2005 (i.e., FY2006) onward. The linkage between report records and foster care records is only possible on or after this date. Additionally, RAPIDS data include investigated report records from before FY2006 (i.e., FY2002-2005) to allow for the examination of prior history of report records for children in foster care during and after FY2006.

Useful information on the source datasets can be found in the code books and user's guides for the NCANDS Child File and AFCARS, which are available online from NDACAN.

The RAPIDS program includes data from all state-years without any exclusions. However, it is important to note that records from certain state-years cannot be linked to their subsequent year's records at the child level, posing a challenge known as the data discontinuity problem. This issue prevents the longitudinal tracking of children during the state-years affected by the data discontinuity problem. Documentation for identifying and addressing this problem is available in the "IntegrationProgram.sas." Users are strongly encouraged to assess this issue thoroughly and exercise caution in selecting state-years for their analysis. This precaution is crucial to prevent potential left or right-censoring issues. This issue is also described above under "Current States Available in RAPIDS" and in Appendix B.

Another issue arises from the delayed reporting within NCANDS. The RAPIDS dataset includes 2002-2021 NCANDS Child Files. Approximately 15% of reports with dates in FY2021 are not included in the 2021 Child File but are expected to be available in the 2022 Child File. This delay occurs every year, not only in 2021, because many states do not include records that are not yet completed in their annual data uploads. Therefore, caution is advised when using report records from FY2021 without also referencing the 2022 Child File, as this omission may result in a significant underestimation of reporting risk for FY2021.

National County-Level Longitudinal Data. The county dataset covers report records (i.e., report rates) and census variables for all counties in 50 states and DC from 2007 to 2019. The chosen timeframe aligns with the availability of the US Census Bureau's American Community Survey (ACS) 5-year estimates, ranging from ACS 2005-2009 (midyear = 2007) to ACS 2017-2021 (midyear = 2019). It is worth noting that the county-level longitudinal dataset remains unaffected by the child-level data discontinuity problem mentioned earlier. Nevertheless, report rates are not available for a few state-years due to the absence of data submissions. Furthermore, the RAPIDS programs identify and exclude a few additional state-years with potential county identifier (FIPS) entry errors. Comprehensive documentation and programmatic management of these state-years are provided in the "RAPIDS_C1_CMR_County.sas" program.

9. Analytic Considerations

a. Data Structure and Unique ID
    i. The national individual-level longitudinal data has a five-level structure:
        1. Episode (a report or a foster care entry-to-exit episode; unique ID = ZID + ZNum)
        2. Child (unique ID = ZID). We use ZID instead of the ID's from the source data.
        3. Family (unique ID = FID from "RAPIDS_I4_FamID.sas" and "RAPIDS_I5_AnalysisFamData.sas")
        4. County (unique ID = C_RptFIPS for the residential county at the time of a report; F1_FIPSCODE for a local CPS agency's county at the time of a foster care entry; F2_FIPSCODE for a local CPS agency's county at the time of a foster care exit)
        5. State (unique ID = the first two digits of C_RptFIPS for the residential state at the time of a report; F1_STATE for a local CPS agency's state at the time of a foster care entry; F2_STATE for a local CPS agency's state at the time of a foster care exit)
    ii. The national county-level longitudinal data has a three-level structure:
        1. County-year observation (unique ID = CountyYear)
        2. County (unique ID = CountyFIPS)
        3. State (unique ID = StateFIPS)

b. Using multiple years – Linkage issues
    i. States might change IDs from year to year with NCANDS submissions.
    ii. State may not have submitted data in a particular year.

iii. Sometimes states submit or resubmit late, so an unlinkable year becomes linkable with later versions of the source data files. NCANDS frequently updates files.
iv. State/year linkage grids can be found in Appendix B.
v. 2013-2014 and onward look good for almost all (47) states.

c. Suppressed Counties
i. The NCANDS Child Files (report records) and AFCARS Foster Care Files (foster care records) suppress county identifiers for records originating from counties with fewer than 1,000 reports or foster care cases, respectively. This measure is taken to safeguard confidentiality in areas with a limited number of cases. As a result, identifiers for many low-populated counties, particularly those in rural regions, are suppressed in both the Child Files and Foster Care Files.
ii. **National individual-level longitudinal data (report records + foster care records):** The RAPIDS programs will incorporate county-level census variables based on the residential counties at the time of the event, only for records with unsuppressed county identifiers.
iii. **National county-level longitudinal data (report records):** NCANDS Child Files suppress county identifiers for records from counties with less than 1,000 reports by replacing original county FIPS codes with "000". However, the state identifiers of these records remain unsuppressed. The RAPIDS programs utilize state identifiers to aggregate records from suppressed counties into a pseudo county per state. For the sake of longitudinal stability for a pseudo county, if a county is suppressed in any given year between 2007 to 2019, the RAPIDS programs combine this county into a pseudo county per state. This ensures that no county, including suppressed ones, is excluded from the final dataset, enabling the national county-level longitudinal data to cover almost all US counties within the specified period. It is important to note that the aggregation may lead to a loss of variation between low-populated counties, especially rural ones. However, large rural counties remain unsuppressed. This allows the dataset to include multiple rural counties (unsuppressed and pseudo counties) per state for analysis. Detailed documentation and the codes to identify suppressed counties and aggregate them into a pseudo county per state are available in the "RAPIDS_C1_CMR_County.sas" and "RAPIDS_C4_Grand_Merge.sas" programs.

d. Data quality issues
i. Data quality is largely as found in the source datasets. However, created variables (not "C_... or F1… or F2…) variables are often subjected to additional quality assurance in RAPIDS. For example, clearly wrong variables (such as impossible dates of birth) are dealt with in the code. The coding documentation (within the programs) includes extensive plain-language descriptions of these changes.

10. Policy Data Integration

The policy environment in which child welfare systems operate varies between states and may change over time. These differences reflect decisions by state legislators and policy makers regarding how to operationalize federal and state social welfare program mandates. Generally, these mandates are broad. While federal funding mandates some elements of state social welfare systems, states are largely free to develop their own policies that guide child welfare report and case decision making, that underlie social welfare benefit levels, duration, and limits and that further shape the social welfare safety net within each state. As a result, the context in which families live and in which child welfare work takes place is inconsistent across the US and can also change over time. Longitudinal and cross-sectional research incorporating contextual variables (such as policies) fosters more robust insights into factors affecting outcomes of interest.

The RAPIDS Policy Data File encompasses state-level calendar year policy data from an array of publicly available resources. These include the annual Child Maltreatment report (e.g., US DHHS, 2023) Child Welfare Information Gateway State Statute Series (CWIG, n.d.), the State Child Abuse & Neglect (SCAN) Policies Database (Weigensberg, 2022), the University of Kentucky's Center for Poverty Research (UKCPR) National Welfare Data data series (UKCPR, 2023), the Urban Institute's Welfare Rules Databook (Urban Institute, 2022), and other topic-specific resources (Universal Preschool: National Institute for Early Education Research [NIEER], n.d.; Federal and State Child Welfare Funding: Child Trends, n.d. and Connelly and Rosinksy, 2018; State Foster Care and Congregate Care Provider Counts: The Imprint, n.d.a and n.d.b). Policy data from 2002 – 2021 are captured in the file, but the amount of historic policy data that is available differs by social welfare program.

While RAPIDS administrative data span from 2006 - 2021, we compiled policy data from prior years to support examinations of policy stability or fluctuations for intervening years where policy data were not collected (e.g., administrative structure, universal mandatory reporting). Further, some data are collected annually, while others are collected sporadically. Although policies do not tend to fluctuate much, users of the data can examine whether associations between policies and outcomes of interest vary over time using random effects models that include interactions between policy data and years. Where the interactions are not significant, there is empirical support for assuming that the policy did not change in the intervening year(s). Interested users can find files on LDBase at https://ldbase.org/projects/e51e6722-01d3-4723-8ed5-860afb3b5fde.

11. Confidentiality Issues and Non-Precise Time Variables

The NCANDS Child File and the AFCARS files do not provide accurate dates. In short, accurate times are not provided in either dataset because accurate times would allow confidentiality to be compromised. Unfortunately, these dates are "blurred" in different ways in each dataset. AFCARS data do include accurate time data relative to the temporal spacing between events (e.g. you will not get the correct date for foster care entry and exit, or foster care entry and the next entry, but the dates will be correct relative to each other [elapsed time will be correct]). AFCARS data can be off by up to 15 days. Child File data can be off by up to 8 days. In the worst cases, the AFCARS variables (those start with 'F_') and the Child File variables (those start with 'C_') can be off by up to 23 days *relative to each other*. This is mostly an issue when precise sequencing is a core issue of the analytic strategy employed in the research. We recommend carefully considering this when working on new projects. For example, if our team is interested in sequencing events, and the design requires that we absolutely avoid mis-specifying a foster care entry date as before a child abuse report (when it might have been after), we would "move back" the child abuse report dates by 23 days (for purposes of this analysis only).

Section 1.b: GETTING STARTED WITH RAPIDS

1. The following components exist in the LDBase download:
   - Seven SAS Programs: These are titled "RAPIDS_I1…" through "RAPIDS_I6…", and "ExampleProgram". There is also a "RAPIDS_I Programs Documentation…" file in .docx format.
   - User Guide
   - 18 ACS files, 05/09 5 year estimate data through 17/21 (all .sas7bdat files)
   - "Variable List" in Excel (.csv)
   - "Valid Yearly Rapids Data Linkages" (.docx)
   - "SAS MEMSIZE Change" Instructions for changing SAS Config settings in .docx file.
   - Folder containing 21 "Basic Stats" files (.html)
   - RuralUrbanCodes2013 (Excel workbook with RUCC codes at county level)

2. Obtain the RAPIDS programs along with the pertinent documentation, including user guides and codebooks, from the RAPIDS project site at https://doi.org/10.33009/ldbase.1702395744.2e6b. To execute the RAPIDS programs, a SAS program is necessary (base SAS 9.4). Users can review the RAPIDS programs by opening them with a text editor, such as Notepad.

   NOTE: Users with computing constraints can use the sister-programs to those below with the suffix "…Lite". Users should use entirely "…Lite" programs or no "…Lite" programs.

   a. The RAPIDS programs used to construct the national individual-level longitudinal data:
      i. Programs
         1. RAPIDS_I1_IntegrationProgram.sas
         2. RAPIDS_I2_AnalysisData.sas
         3. RAPIDS_I3_CensusAddOn.sas
         4. RAPIDS_I4_FamID.sas
         5. RAPIDS_I5_AnalysisFamData.sas
         6. RAPIDS_I6_SplitColumns.sas (optional)
      ii. Documentation
         1. RAPIDS_I Programs Documentation_ReadMeFirst.docx
         2. AFCARS and NCANDS User Guides and Codebooks from NDACAN website
         3. This RAPIDS User Guide
         4. Basic statistics from the dataset created by each program
   b. The RAPIDS programs used to construct the national county-level longitudinal data:
      i. Programs
         1. RAPIDS_C1_CMR_County.sas
         2. RAPIDS_C2_Census_County.sas
         3. RAPIDS_C3_USDA_RUC.sas
         4. RAPIDS_C4_Grand_Merge.sas
      ii. Documentation
         1. RAPIDS_C Programs Documentation_ReadMeFirst.docx
         2. This RAPIDS User Guide
         3. Basic statistics from the dataset created by each program

NOTE: Basic statistics generated by users may vary from ours based on the versions of Child Files and Foster Care Files they utilize. Minor deviations are likely acceptable, but substantial differences could indicate errors in executing the RAPIDS programs.

3. Download the raw data, which is essential for running the RAPIDS programs, directly from the original sources.
   a. NCANDS Child Files 2002-2021: Access to these datasets is freely available to qualified researchers, including university faculty and doctoral students. Copy the SAS datasets that do not contain an "f" in the filename (e.g., **cf2002v6.sas7bdat**, not **cf2002v6f.sas7bdat**) and paste them into a single file directory. For more information on eligible users and the application process, please refer to the following link: https://www.ndacan.acf.hhs.gov/datasets/request-restricted-data.cfm
   b. AFCARS Foster Care Files 2005-2021: Access to these datasets is freely available to qualified researchers, including university faculty and doctoral students. For more information on eligible users and the application process, please visit the following link: https://www.ndacan.acf.hhs.gov/datasets/request-dataset.cfm

c. American Community Survey (ACS) 5-year estimates from ACS 2005-2009 to ACS 2017-2021: Access to these datasets is freely available to the public. For detailed instructions on how to access these datasets, please refer to the "RAPIDS_I3_CensusAddOn.sas" and the "RAPIDS_C2_Census_County.sas" programs.
d. US Department of Agriculture Rural-Urban Continuum Codes: Access to this dataset is freely available to the public. For detailed instructions on how to access this dataset, please refer to the "RAPIDS_I3_CensusAddOn.sas" and "RAPIDS_C3_USDA_RUC.sas" programs.

4. Copy or move raw data into a new file directory (folder) for each data source. All data from the same source (e.g., all NCANDS Child File datasets) must be in the same folder. Additionally, create a folder for the output datasets.
    a. NCANDS Child Files 2002-2021: Create a new folder for NCANDS Child File input data. You can name this folder whatever you want. Copy or move all NCANDS Child Files SAS datasets **that do NOT contain the letter "f" in the title** into this new folder. For example, if you have version 6 of the 2002 NCANDS Child File, then you would copy or move cf2002v6.sas7bdat (not cf2002v6f.sas7bdat) into the new NCANDS folder.
    b. AFCARS Foster Care Files 2005-2021: Create a new folder for AFCARS Foster Care file input data. You can name this folder whatever you want. Copy or move all AFCARS Foster Care files **that do NOT contain the letter "f" in the title** into this new folder. For example, if you have version 5 of the 2005 AFCARS Foster Care file, then you would copy or move fc2005v5a.sas7bdat (not fc05v5f.sas7bdat) into the new AFCARS folder.
    c. ACS 5-Year Estimates from ACS 2005-2009 to ACS 2017-2021: Create a new folder for ACS input data. You can name this folder whatever you want. Copy or move all ACS 5-Year Estimate files into the new ACS folder.
    d. US Department of Agriculture Rural-Urban Continuum Codes: Create a new folder for the Rural-Urban Continuum Code data. Copy or move the Rural-Urban Continuum Code data into the new Rural-Urban Continuum Code folder.
    e. Save folder: Create a new folder for saving the output datasets.
5. Carefully review the RAPIDS programs and accompanying documentation.
6. Execute the I1 Integration Program in SAS as follows:
    a. Open the RAPIDS_I1_IntegrationProgram.sas file in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_I1_IntegrationProgram_v5.sas.)
    b. Search for "TODO" in the comments of the code. You can use "ctrl + F" to search. The "TODO" sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the "TODO" sections are provided both here and in the code files.
        i. Update the LIBNAME statements in the code. You will need to provide the file paths for the folder containing your NCANDS Child Files, the folder containing your NCANDS Foster Care files, and the folder where you want to save the output dataset.
        ii. Verify that the dataset version numbers in the code match the version numbers on your input files. If they do not match, then update the version numbers in the code accordingly. (e.g., data A2002; set c.cf2002**v6**; run;)
        iii. If you want to include NCANDS and AFCARS data for additional years, then add new lines of code reading in the new files. (e.g., data A2022; set c.cf2022v1; run;)
            1. Repeat this process in the sections that create the linkage grid between years. There is sample code in the comments of the code file.
    c. Once you finish the last TODO section, run the code. Note that it is normal for the code to take multiple hours to run.
    d. When the code finishes running, save the html output and the log file.
7. Execute the I2 Analysis Data program in SAS as follows:
    a. Open the RAPIDS_I2_IntegrationProgram.sas file in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_I2_AnalysisData_v4.sas)
    b. Search for "TODO" in the comments of the code. You can use "ctrl + F" to search. The "TODO" sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the "TODO" sections are provided both here and in the code files.
        i. Update the LIBNAME statement in the code. You will need to provide the file path to the folder where you saved the output dataset from the I1 Integration Program.

ii. If you want to include data for additional years, then add new lines of code for the ZYear1, ZYear2, and ZFostExit variables. All of these items are marked with "TODO" in the code file.

c. Once you finish the last TODO section, run the code. Note that it is normal for the code to take multiple hours to run.

d. When the code finishes running, save the html output and the log file.

8. Execute the I3 CensusAddOn program in SAS as follows:
    a. Open the RAPIDS_I3_CensusAddOn.sas file in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_I3_CensusAddOn_v2.sas)
    b. Search for "TODO" in the comments of the code. You can use "ctrl + F" to search. The "TODO" sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the "TODO" sections are provided both here and in the code files.
        i. Update the LIBNAME statements in the code. You will need to provide the file path to the folder containing your ACS data, the folder containing the output dataset from the I2 AnalysisData program, and the folder where you want to save the output dataset of this program.
        ii. The comments of the code will remind you where to download the ACS data and the Rural-Urban Code data needed to run the code. If you have already downloaded the data, then you may skip these steps.
        iii. You may also comment out unwanted ACS variables from the keep statement if you do not want them in the output. This step is optional, and you may skip it if you want to keep all variables (the default).
        iv. Update the PROC IMPORT statement to the file path and name of the Rural Urban Code 2013 data.
    c. Once you finish the last TODO section, run the code. Note that it is normal for the code to take multiple hours to run.
    d. When the code finishes running, save the html output and the log file.
9. Execute the I4 FamID program in SAS as follows:
    a. Open the RAPIDS_I4_FamID.sas program in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_I4_FamID_v2.sas)
    b. Search for "TODO" in the comments of the code. You can use "ctrl + F" to search. The "TODO" sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the "TODO" sections are provided both here and in the code files.
        i. Update the LIBNAME statements in the code. You will need to provide the file path to the folder containing your NCANDS Child Files, the folder containing your AFCARS Foster Care Files, the folder containing your output dataset from the I1 program, and the folder where you want to save the output datasets from this program.
        ii. Verify that the dataset version numbers in the code match the version numbers on your input files. If they do not match, then update the version numbers in the code accordingly. (e.g., data A2002; set c.cf2002**v6**; run;)
        iii. If you want to include NCANDS and AFCARS data for additional years, then add new lines of code reading in the new files. (e.g., data A2022; set c.cf2022v1; run;)
    c. Once you finish the last TODO section, run the code. This code should run more quickly than programs I1-I3.
    d. When the code finishes running, save the html output and the log file.
10. Execute the I5 AnalysisFamData program in SAS as follows:
    a. Open the RAPIDS_I5_AnalysisFamData.sas program in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_I5_AnalysisFamData_v2.sas)
    b. Search for "TODO" in the comments of the code. You can use "ctrl + F" to search. The "TODO" sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the "TODO" sections are provided both here and in the code files.
        i. Update the LIBNAME statement in the code. You will need to provide the file path to the folder containing the output datasets from the I4 program. The output dataset from this program will be saved in the same folder.
    c. Once you finish the TODO section, run the code. Note that it is normal for the code to take multiple hours to run.

d. The code for this program is so long that the SAS log file will become full, and SAS will ask if you want to save the log file to a file on your computer. Save the log file, and then the code will continue running.
e. When the code finishes running, save the html output and the log file. Append this final log file to the log file you saved earlier.

11. OPTIONAL: Execute the I6 SplitColumns program in SAS as follows: (Note that the I6 SplitColums program is a convenience feature we provide. It takes the output datasets from the RAPIDS I1-I5 programs and creates individual files for each column from each dataset. Users may then read only desired columns into SAS, similarly to selecting desired columns from a database. It also removes duplicate columns from the output datasets of the RAPIDS I1-I5 programs.)
    a. Open the RAPIDS_I6_SplitColumns.sas program in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_16_SplitColumns.sas)
    b. Update the LIBNAME statements in the code. You will need to provide the file path to the folder containing the output datasets from the RAPIDS I1-I5 programs and the folder where you want to save the output column files. There are no sections labelled “TODO” in this program.
    c. After updating the LIBNAME statements, run the code. Note that it is normal for the code to take longer than a day to run.
    d. When the code finishes running, save the log file. There is no html output for this program.
12. Execute the C1 CMR County program in SAS as follows:
    a. Open the RAPIDS_C1_CMR_COUNTNY.sas program in Sas. (Note: as of publication of this User Guide, the current version is RAPIDS_C1_CMR_COUNTNY_v2.sas)
    b. Search for “TODO” in the comments of the code. You can use “ctrl + F” to search. The “TODO” sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the “TODO” sections are provided both here and in the code files.
        i. Update the LIBNAME statements in the code. You will need to provide the file path to the folder containing your NCANDS Child Files and the folder where you want to save the output dataset from this program.
        ii. The comments of the code will remind you where to download the NCANDS Child Files needed to run the code. If you have already downloaded the data, then you may skip this step.
    c. Once you finish the TODO sections, run the code. All RAPIDS County programs should run quickly.
    d. When the code finishes running, save the html output and the log file.
13. Execute the C2 Census County program in SAS as follows:
    a. Open the RAPIDS_C2_Census_County.sas program in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_C2_Census_County_v2.sas)
    b. Search for “TODO” in the comments of the code. You can use “ctrl + F” to search. The “TODO” sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the “TODO” sections are provided both here and in the code files.
        i. Update the LIBNAME statements in the code. You will need to provide the file path to the folder containing your ACS data and the folder where you want to save the output dataset from this program.
        ii. The comments of the code will remind you where to download the ACS data needed to run the code. If you have already downloaded the data, then you may skip this step.
    c. Once you finish the TODO sections, run the code. All RAPIDS County programs should run quickly.
    d. When the code finishes running, save the html output and the log file.
14. Execute the C3 USDA RUC program in SAS as follows:
    a. Open the RAPIDS_C3_USDA_RUC.sas program in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_C3_USDA_RUC_v2.sas)
    b. Search for “TODO” in the comments of the code. You can use “ctrl + F” to search. The “TODO” sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the “TODO” sections are provided both here and in the code files.

        i. Update the PROC IMPORT and LIBNAME statements in the code. You will need to provide the file path and name for your 2013 Rural Urban Code data and the file path to the folder where you want to save the output dataset from this program.
    c. Once you finish the TODO sections, run the code. All RAPIDS County programs should run quickly.
    d. When the code finishes running, save the html output and the log file.
15. Execute the C4 Grand Merge program in SAS as follows:
    a. Open the RAPIDS_C4_Grand_Merge.sas program in SAS. (Note: as of publication of this User Guide, the current version is RAPIDS_C4_Grand_Merge_v2.sas)
    b. Search for “TODO” in the comments of the code. You can use “ctrl + F” to search. The “TODO” sections require the user to modify the code. These modifications require only changes to file paths specified in SAS in LIBNAME and IMPORT statements. Instructions for the “TODO” sections are provided both here and in the code files.
        i. Update the LIBNAME statement in the code. You will need to provide the file path to the folder containing the output datasets from the C1-C3 programs.
    c. Once you finish the TODO section, run the code. All RAPIDS County programs should run quickly.
    d. When the code finishes running, save the html output and the log file.
16. For troubleshooting purposes, basic statistics from the dataset created by each program are included in the documentation. The codes to generate these basic statistics are provided at the end of each program. Users can compare their statistics with those in the documentation to verify the proper execution of the programs. It's important to note that slight variations in basic statistics may occur between users and this project, depending on the versions of Child Files and Foster Care Files used.
17. RAPIDS Policy Data can also be merged into the RAPIDS data file using the State FIPS codes and year.
18. Note dates are formatted as a SAS dates, not in mm/dd/yyyy format (or similar). The website https://www.sastipsbyhal.com/2012/01/sas-date-calculator-now-available.html can convert a single date in SAS into an understandable date for checking purposes when you are getting started.

Section 2: VARIABLES REPLICATED DIRECTLY FROM NCANDS CHILD FILE

These variables are replicated directly from NCANDS by IntegrationProgram.sas. For example, the existing NCANDS Child File variable "ChID" is replicated as "C_ChID". One row in RAPIDS represents an episode; these variables (C_) describe characteristics of a child-report episode). Users should complete a thorough read of the NCANDS Child File User Guide before embarking on use of the RAPIDS variables from NCANDS. Access the relevant NCANDS Codebook for the year of data in use for a complete description of each NCANDS variable: https://www.ndacan.acf.hhs.gov/datasets/datasets-list-ncands-child-file.cfm. A list of the RAPIDS variables pulled directly from NCANDS follows here.

#	Variable description	Variable name
1	Submission Year	C_SubYr
2	State or Territory	C_StaTerr
3	Report ID	C_RptID
4	Child ID	C_ChID
5	State/County FIPS Code	C_RptFIPS
6	Report Date	C_RptDt
7	Report Time	C_RptTm
8	CPS Response (Investigation) Start Date	C_InvDate
9	Investigation Contact Time	C_InvStrTm
10	Report Source	C_RptSrc
11	Report Disposition	C_RptDisp
12	Report Disposition Date	C_RpDispDt
13	Notifications	C_Notifs
14	Child Age At Report	C_ChAge
15	Child Sex	C_ChSex
16	Child Race Amer Indian or Alaska Native	C_ChRacAI
17	Child Race Asian	C_ChRacAs
18	Child Race Black or African American	C_ChRacBl
19	Race Hawaiian or Other Pacific Islander	C_ChRacNH
20	Child Race White	C_ChRacWh
21	Child Race Unable to Determine	C_ChRacUd
22	Child Hispanic or Latino Ethnicity	C_CEthn
23	Child Living Arrangement	C_ChLvng
24	Military Family Member	C_ChMil
25	Prior Victim	C_ChPrior
26	Maltreatment-1 Type	C_ChMal1
27	Maltreatment-1 Disposition Level	C_Mal1Lev
28	Maltreatment-2 Type	C_ChMal2
29	Maltreatment-2 Disposition Level	C_Mal2Lev
30	Maltreatment-3 Type	C_ChMal3
31	Maltreatment-3 Disposition Level	C_Mal3Lev
32	Maltreatment-4 Type	C_ChMal4
33	Maltreatment-4 Disposition Level	C_Mal4Lev
34	Maltreatment Death	C_MalDeath
35	Alcohol Abuse-Child	C_CdAlc
36	Drug Abuse-Child	C_CdDrug
37	Intellectual Disability-Child	C_CdRtrd
38	Emotionally Disturbance-Child	C_CdEmotnl
39	Visual Or Hearing Impairment-Child	C_CdVisual
40	Learning Disability-Child	C_CdLearn
41	Physically Disabled-Child	C_CdPhys
42	Behavior Problem-Child	C_CdBehav
43	Other Medical Condition-Child	C_CdMedicl
44	Alcohol Abuse-Caretaker(s)	C_FCAlc
45	Drug Abuse-Caretaker(s)	C_FCDrug
46	Intellectual Disability-Caretaker(s)	C_FCRtrd
47	Emotionally Disturbed-Caretaker(s)	C_FCEmotnl
48	Visual or Hearing Impairment-Caretaker	C_FCVisual
49	Learning Disability-Caretaker(s)	C_FCLearn
50	Physical Disability-Caretaker(s)	C_FCPhys
51	Other Medical Condition-Caretaker(s)	C_FCMedicl
52	Domestic Violence	C_FCViol
53	Inadequate Housing	C_FCHouse
54	Financial Problems	C_FCMoney
55	Public Assistance	C_FCPublic
56	Post Investigation Services	C_PostServ
57	Service Date	C_ServDate
58	Family Support Services	C_FamSup
59	Family Preservation Services	C_FamPres
60	Foster Care Services	C_FosterCr
61	Removal Date	C_RmvDate
62	Juvenile Court Petition	C_JuvPet
63	Petition Date	C_PetDate
64	Court-Appointed Representative	C_CoChRep
65	Adoption Services	C_Adopt
66	Case Management Services	C_CaseMang
67	Counseling Services	C_Counsel
68	Day Care Services-Child	C_Daycare

#	Variable description	Variable name
69	Educational and Training Services	C_Educatn
70	Employment Services	C_Employ
71	Family Planning Services	C_FamPlan
72	Health-Related and Home Health Services	C_Health
73	Home-Based Services	C_Homebase
74	Housing Services	C_Housing
75	Independent and Transitional Living Svcs	C_TransLiv
76	Information and Referral Services	C_InfoRef
77	Legal Services	C_Legal
78	Mental Health Services	C_MentHlth
79	Pregnancy and Parenting Services	C_PregPar
80	Respite Care Services	C_Respite
81	Special Services-Disabled	C_SSDisabl
82	Special Services-Juvenile Delinquent	C_SSDelinq
83	Substance Abuse Services	C_SubAbuse
84	Transportation Services	C_Transprt
85	Other Services	C_OtherSv
86	Perpetrator-1 ID	C_Per1ID
87	Perpetrator-1 Relationship	C_Per1Rel
88	Perpetrator-1 as Parent	C_Per1Prnt
89	Perpetrator-1 as Caregiver	C_Per1Cr
90	Perpetrator-1 Age at Report	C_Per1Age
91	Perpetrator-1 Sex	C_Per1Sex
92	Perp 1 Race Amer Indian or Alaska Native	C_P1RacAI
93	Perpetrator-1 Race Asian	C_P1RacAs
94	Perp-1 Race Black or African American	C_P1RacBl
95	Perp-1 Race Hawaiian or Other Pac Island	C_P1RacNH
96	Perpetrator-1 Race White	C_P1RacWh
97	Perpetrator-1 Race Undetermined	C_P1RacUd
98	Perpetrator-1 Ethnicity Hispanic or Latino	C_Per1Ethn
99	Perpetrator-1 Military Member	C_Per1Mil
100	Perpetrator-1 Prior Abuser	C_Per1Pior
101	Perpetrator-1 Maltreatment-1	C_Per1Mal1
102	Perpetrator-1 Maltreatment-2	C_Per1Mal2
103	Perpetrator-1 Maltreatment-3	C_Per1Mal3
104	Perpetrator-1 Maltreatment-4	C_Per1Mal4

#	Variable description	Variable name
105	Perpetrator-2 ID	C_Per2ID
106	Perpetrator-2 Relationship	C_Per2Rel
107	Perpetrator-2 as Parent	C_Per2Prnt
108	Perpetrator-2 as Caregiver	C_Per2Cr
109	Perpetrator-2 Age At Report	C_Per2Age
110	Perpetrator-2 Sex	C_Per2Sex
111	Perp-2 Race Amer Indian or Alaska Native	C_P2RacAI
112	Perpetrator-2 Race Asian	C_P2RacAs
113	Perp-2 Race Black or African American	C_P2RacBl
114	Perp-2 Race Hawaiian - Pacific Islander	C_P2RacNH
115	Perpetrator-2 Race White	C_P2RacWh
116	Perpetrator-2 Race Undetermined	C_P2RacUd
117	Perpetrator-2 Ethnicity Hispanic or Latino	C_Per2Ethn
118	Perpetrator-2 Military Member	C_Per2Mil
119	Perpetrator-2 Prior Abuser	C_Per2Pior
120	Perpetrator-2 Maltreatment-1	C_Per2Mal1
121	Perpetrator-2 Maltreatment-2	C_Per2Mal2
1122	Perpetrator-2 Maltreatment-3	C_Per2Mal3
123	Perpetrator-2 Maltreatment-4	C_Per2Mal4
124	Perpetrator-3 ID	C_Per3ID
125	Perpetrator-3 Relationship	C_Per3Rel
126	Perpetrator-3 as Parent	C_Per3Prnt
127	Perpetrator-3 as Caretaker	C_Per3Cr
128	Perpetrator-3 Age At Report	C_Per3Age
129	Perpetrator-3 Sex	C_Per3Sex
130	Perp-3 Race Amer Indian or Alaska Native	C_P3RacAI
131	Perpetrator-3 Race Asian	C_P3RacAs
132	Perp-3 Race Black or African American	C_P3RacBl
133	Perp-3 Race Hawaiian - Pacific Islander	C_P3RacNH
134	Perpetrator-3 Race White	C_P3RacWh
135	Perpetrator-3 Race Undetermined	C_P3RacUd
136	Perpetrator-3 Ethnicity Hispanic or Latino	C_Per3Ethn
137	Perpetrator-3 Military Member	C_Per3Mil
138	Perpetrator-3 Prior Abuser	C_Per3Pior

#	Variable description	Variable name
139	Perpetrator-3 Maltreatment-1	C_Per3Mal1
140	Perpetrator-3 Maltreatment-2	C_Per3Mal2
141	Perpetrator-3 Maltreatment-3	C_Per3Mal3
142	Perpetrator-3 Maltreatment-4	C_Per3Mal4
143	AFCARS ID	C_AFCARSID
145	Derived: Child is a Victim on This Report	C_RptVictim
146	Derived: State Foster Care ID	C_StFCID
144	Date of Discharge from Foster Care	C_FCDchDt
147	Substance-Exposed Infant Has a Plan for Safe Care	C_PlnsFCr
148	Referral to Appropriate (CARA-Related) Services	C_RefrCARA
149	Rural-Urban Continuum Code	C_RU13
150	State's Data Version	C_Version
151	Infant with Prenatal Substance Exposure	C_IsIPSE

ADDITIONAL RAPIDS VARIABLES CALCULATED FROM NCANDS ONLY

#	Variable description	Variable name
	County of Report	C_RptCnty
	Race of Child (regardless of Ethnicity)	C_Race
	Race/Ethnicity of Child	C_RaceEthn

Section 3: VARIABLES REPLICATED DIRECTLY FROM AFCARS FOSTER CARE FILE

These variables are replicated directly from AFCARS by IntegrationProgram.sas. For example, the existing AFCARS Foster Care File variable "STATE" is replicated as "F1_ STATE". One row in RAPIDS represents an episode; these variables (F1_ and F2_) describe characteristics of a child-foster care episode). Users should complete a thorough read of the AFCARS Foster Care User Guide before embarking on use of the RAPIDS variables from AFCARS. Access the relevant AFCARS Codebook for the year of data in use for a complete description of each AFCARS variable: https://www.ndacan.acf.hhs.gov/datasets/pdfs_user_guides/afcars-foster-care-file-codebook.pdf.

A list of the RAPIDS variables pulled directly from AFCARS follows here; they have F1_ prefixes. F2_ prefixes are for the same AFCARS variable, referring to a different year. F1_variables are from records at the time of FC entry (or, more precisely, from the annual FC File in the year of entry). F2_variables are from records at the time of FC exit (or, more precisely, from the annual FC File in the year of exit). F1_variables and F2_variables are the same set of variables from the AFCARS files, but F1_variables and F2_variables are measured at different time points. Think of F1_ and F2_variables as wide-form longitudinal records which combine foster care records scattered across different files into one FC entry-to-exit spell per row.

#	Variable description	Variable name
1	The Federal Fiscal Year of this Dataset[1]	F1_FY
--	Dataset version number (years 2007 and prior ONLY)	F1_Version
2	Reporting Period End Date: Year	F1_REPDATYR
3	Reporting Period End Date: Month	F1_REPDATMO
4	State FIPS Code	F1_STATE
5	State Two-Character Code	F1_St
6	Local Agency FIPS Code	F1_FIPSCODE
7	Record Number (not unique) (aka AFCARSID)	F1_RecNumbr
10	Child Sex	F1_SEX
11	Child Amer Indian/AK Native	F1_AMIAKN
12	Child Asian	F1_ASIAN
13	Child Black/African Amer	F1_BLKAFRAM
14	Child Hawaiian/Pacif Islander	F1_HAWAIIPI
15	Child White	F1_WHITE
16	Unable To Determine Child Race	F1_UNTODETM
17	Child Hispanic Origin	F1_HISORGIN
18	Child has been clinically Diagnosed with Disability	F1_CLINDIS
19	Mental Retardation	F1_MR
20	Visually Or Hearing Impaired	F1_VISHEAR
21	Physically Disabled	F1_PHYDIS
22	Emotionally Disturbed[2]	F1_EmotDist

[1] Note that the federal fiscal year variable was called DataYear (not FY) in AFCARS for years 2007 and prior. The RAPIDS program IntegrationProgram.sas changes all years to be 'FY' not "DataYear".

[2] Note that the EmotDist variable was called DSMIII in AFCARS for years 2007 and prior. Users conducting longitudinal research may wish to

#	Variable description	Variable name
23	Other Medically Diagnosed Condition requiring Special Care	F1_OTHERMED
24	Child Ever Adopted	F1_EVERADPT
25	Age At Adoption	F1_AGEADOPT
27	Total Number Of Removals	F1_TOTALREM
32	Number of Placement Settings During the	F1_NUMPLEP
33	Removal Manner	F1_MANREM
34	Removal Reason-Physical Abuse	F1_PHYABUSE
35	Removal Reason-Sexual Abuse	F1_SEXABUSE
36	Removal Reason-Neglect	F1_NEGLECT
37	Removal Reason-Alcohol Abuse Parent	F1_AAPARENT
38	Removal Reason-Drug Abuse Parent	F1_DAPARENT
39	Removal Reason-Alcohol Abuse Child	F1_AACHILD
40	Removal Reason-Drug Abuse Child	F1_DACHILD
41	Removal Reason-Child Disability	F1_CHILDIS
42	Removal Reason-Child Behavior Problem	F1_CHBEHPRB
43	Removal Reason-Parent Death	F1_PRTSDIED
44	Removal Reason-Parent Incarceration	F1_PRTSJAIL
45	Removal Reason-Caretaker Inability Cope	F1_NOCOPE
46	Removal Reason-Abandonment	F1_ABANDMNT
47	Removal Reason-Relinquishment	F1_RELINQSH
48	Removal Reason-Inadequate Housing	F1_HOUSING
49	Current Placement Setting	F1_CURPLSET
50	Out Of State Placement	F1_PLACEOUT
51	Most Recent Case Plan Goal	F1_CASEGOAL
52	Principal Caretaker Family Structure	F1_CTKFAMST
53	1st Principal Caretaker Year Of Birth	F1_CTK1YR
54	2nd Principal Caretaker Year Of Birth	F1_CTK2YR
58	Foster Family Structure	F1_FOSFAMST
59	1st Foster Caretaker Year Of Birth	F1_FCCTK1YR
60	2nd Foster Caretaker Year Of Birth	F1_FCCTK2YR
61	1st Foster Caretaker Am Indian/AK Native	F1_RF1AMAKN

#	Variable description	Variable name
62	1st Foster Caretaker Asian	F1_RF1ASIAN
63	1st Foster Caretaker Black/Af Amer	F1_RF1BLKAA
64	1st Foster Caretaker Hawaii/Pacif Island	F1_RF1NHOPI
65	1st Foster Caretaker White	F1_RF1WHITE
66	1st Foster Caretaker Unable To Det. Race	F1_RF1UTOD
67	1st Foster Caretaker Hispanic Origin	F1_HOFCCTK1
68	2nd Foster Caretaker Am Indian/AK Native	F1_RF2AMAKN
69	2nd Foster Caretaker Asian	F1_RF2ASIAN
70	2nd Foster Caretaker Black/Af Amer	F1_RF2BLKAA
71	2nd Foster Caretaker Hawaii/Pacif Island	F1_RF2NHOPI
72	2nd Foster Caretaker White	F1_RF2WHITE
73	2nd Foster Caretaker Unable To Det. Race	F1_RF2UTOD
74	2nd Foster Caretaker Hispanic Origin	F1_HOFCCTK2
77	Discharge Reason	F1_DISREASN
78	Title IV-E Foster Care Payments	F1_IVEFC
79	Title IV-E Adoption Assistance	F1_IVEAA
80	Title IV-A TANF Payment	F1_IVAAFDC
81	Title IV-D Child Support Funds	F1_IVDCHSUP
82	Title XIX Medicaid	F1_XIXMEDCD
83	SSI Or Social Security Act Benefits	F1_SSIOTHER
84	Only State Or Other Support	F1_NOA
85	Monthly FC Payment	F1_FCMntPay
9	Date of Birth of the Foster Child	F1_DOB
26	Date of First Removal	F1_Rem1Dt
28	Discharge Date For Previous Removal	F1_DLstFCDt
29	Date of Latest Removal	F1_LatRemDt
31	Begin Date for Current Placement Setting	F1_CurSetDt
75	Date of Discharge from Foster Care	F1_DoDFCDt
55	Date of the mother's termination of parental rights	F1_TPRMomDt
56	Date of the father's termination of parental rights	F1_TPRDadDt
57	Date of second parent's loss of parental	F1_TPRDate

combine EmotDist and DSMIII into one variable with a common name across years.

#	Variable description	Variable name
8	Periodic Review Date	F1_PedRevDt
30	Removal Transaction Date	F1_RemTrnDt
76	Date that the discharge was recorded	F1_DoDTrnDt
86	Length (days) since latest removal	F1_LatRemLOS
87	Length (days) in Current Placement Setti	F1_SettingLOS
88	Length (days) of previous FC stay	F1_PreviousLOS
89	Total days stay in FC, all episodes	F1_LifeLOS
90	Age on the first day of the fiscal year	F1_AgeAtStart
91	Age of Child at the Most Recent Removal /Entry into FC	F1_AgeAtLatRem
92	Age of Child at the End of FFY, or at Exit	F1_AgeAtEnd
93	In FC at the beginning of the FFY	F1_InAtStart

#	Variable description	Variable name
94	In FC at the end of the fiscal year	F1_InAtEnd
95	Entered FC during the fiscal year	F1_Entered
96	Discharged from FC during FFY	F1_Exited
97	In at start or entered FC during FY	F1_Served
98	F1_IsWaiting	F1_IsWaiting
99	F1_IsTPR	F1_IsTPR
100	F1_AgedOut	F1_AgedOut
101	Derived (in AFCARS) Race/Ethnicity Variable	F1_RaceEthn
102	Derived (in AFCARS) Race Variable	F1_Race
103	Rural Urban Continuum Code	F1_RU13
104	State AFCARS ID: Combined St and RecNumbr	F1_StFCID

Section 4: VARIABLES CREATED USING BOTH NCANDS CHILD FILE AND AFCARS FOSTER CARE FILE

One row in RAPIDS represents an episode; these variables (z_) describe characteristics of either a child-report or child-foster care episode.

#	Variable description	Variable name	Type	Length	Code Values	Notes
1	Type of episode	ZType	Char	1	C=child maltreatment report F=foster care entry-to-exit spell	
2	State two-character code	ZState	Char	14		
3	Child ID	ZID	Char	14	1. If ZType=C then ZID=StaTerr||AFCARSID [if linkable to FC Files] OR CREATED [if not linkable] 2. If ZType=F then ZID=St||RecNumbr	||=IDs are concatenated. Note that for both Ztype C and F, the RAPIDS program is concatenating a 2-letter state code and an ID number.
4	Report Record ID	C_ZLink	Num	8	Numeric ID.	RAPIDS-assigned unique record identifier; only populated for NCANDS Child File records.
5	FC Entry Record ID	F1_ZLink	Num	8	Numeric ID	RAPIDS-assigned unique record identifier; only populated for AFCARS Foster Care File records at entry.
6	FC Exit Record ID	F2_ZLink	Num	8	Numeric ID	RAPIDS-assigned unique record identifier; only populated for AFCARS Foster Care File records at exit.
7	Begin date of an episode (date of report or date of foster care entry)	ZDate	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	If ZType=F then the episode is a foster care entry; if ZType=C then the episode is a child maltreatment report. If the user wishes to calculate the number of days between two dates, simply subtract.
8	Date of exit from foster care	ZFostExit	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	If ZType=F, then ZFostExit equals date of exit from foster care and [ZFostExit minus ZDate] equals the length of the entry-to-exit FC spell; if ZType=C then ZFostExit is missing.
9	Restored foster care record indicator	ZPhantom	Num	8	1. If ZType=F then: a. 0=FC spells from LatRemDt b. 1=phantom(hidden) spells from Rem1Dt c. 2=phantom(hidden) spells from DLstFCDt	ZPhantom records do not exist in AFCARS as one complete, unique record. Since AFCARS data are fiscal year, if there are multiple foster spells in one fiscal year, then older spells are overwritten by newer spells. However, Rem1Dt and DLstFCDt allows us to identify some of these hidden spells.

#	Variable description	Variable name	Type	Length	Code Values	Notes
					2. If ZType=C then Missing	ZPhantom=1 indicates that this is a restored record from Rem1Dt and DLstFCDt dates. ZPhantom=2 indicates that this is a restored record from DLstFCDt and interpolation. ZPhantom=0 is not a restored record (i.e. is a complete AFCARS record). See Appendix C for more information on restored foster care record indicators).
10	Within-child rank order of all episodes	ZNum	Num	8	1=1st episode 2=2nd episode 3= 3rd episode (and so on…)	No maximum value; Rank order of all episodes (ZType = C for CM report or ZType = F for FC entry) within a child(ZID).
11	Child maltreatment report history	ZCNum	Num	8	1. If ZType=F then: a. Number of previous CM reports 2. If ZType=C then: a. 1=1st report b. 2=2nd report c. 3rd report (and so on…)	Note: either number of previous CM reports or rank order of child maltreatment reports within a child
12	Foster care entry history	ZFNum	Num	8	3. If ZType=F then: a. 1=1st entry b. 2=2nd entry c. 3rd entry (and so on…) 4. If ZType=C then: a. Number of previous CM reports	Note: either number of previous foster care entries or rank order of foster care entries within a child
13	Date of 1st previous child maltreatment report from the present episode	ZCMPrev	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
14	Date of 1st previous foster care entry from the present episode	ZFCPrev	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
15	Date of 2nd previous child maltreatment report from the present episode	ZCMPrev2	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
16	Date of 2nd previous foster care entry from the present episode	ZFCPrev2	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
17	Date of 1st subsequent child maltreatment report from the present episode	ZCMNext	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	

#	Variable description	Variable name	Type	Length	Code Values	Notes
18	Date of 1st subsequent foster care entry from the present episode	ZFCNext	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
19	Date of 2nd subsequent child maltreatment report from the present episode	ZCMNext2	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
20	Date of 2nd subsequent foster care entry from the present episode	ZFCNext2	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	
21	First-recorded non-missing date of birth (DOB) for foster care entries	ZDOB	Num	8	Values are numbers; this is a formatted as a SAS date string (not formatted as a date).	If ZType=F, first-recorded non-missing DOB; If ZType=C then missing. Note that the NCANDS Child Files provide no DOB, only the child's age at time of report.
22	Child age at CM report or FC entry	ZAGE	Num	8	If ZType=F, child age at FC entry If ZType=C, child age at CM report	Derived from ZDOB & ZDate. If age at CM report, uses variable C_ChAge).
23	Child Sex	ZSex	Num	8	1=male 2=female	If ZType=F, variable equals F1_SEX; if ZType=C variable=equals C_ChSex.
24	Child race/ethnicity	ZRace	Num	8	1=Non-Hispanic White 2=Non-Hispanic Black 3=Non-Hispanic American Indian/Alaska Native 4=Non-Hispanic Asian 5=Non-Hispanic Native Hawaiian/Pacific Islander 6=Non-Hispanic Two or more races 7=Hispanic/Latiné	
25	Neglect is reported in CM report	ZRptNeg	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=neglect is reported in CM report (either alone or with other types) b. 0=otherwise	
26	Physical abuse is reported in CM report	ZRptPhy	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=physical abuse is reported in CM report (either alone or with other types) b. 0=otherwise	

#	Variable description	Variable name	Type	Length	Code Values	Notes
27	Sexual abuse is reported in CM report	ZRptSex	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=sexual abuse is reported in CM report (either alone or with other types) b. 0=otherwise	
28	Emotional abuse is reported in CM report	ZRptEmo	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=emotional abuse is reported in CM report (either alone or with other types) b. 0=otherwise	
29	Sex trafficking is reported in CM report	ZRptTff	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=sex trafficking is reported in CM report (either alone or with other types) b. 0=otherwise	
30	'Other' maltreatment is reported in CM report	ZRptOth	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1='other' maltreatment is reported in CM report (either alone or with other types) b. 0=otherwise	
31	Multiple maltreatment types reported	ZRptMix	Num	8	1. If ZType=F then missing 2. If ZType=C then	

#	Variable description	Variable name	Type	Length	Code Values	Notes
					a. 1=multiple types of maltreatment are reported in CM report b. 0=otherwise	
32	No alleged maltreatment in CM report	ZRptNot	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=multiple types of maltreatment are reported in CM report b. 0=otherwise	
33	Reported CM type in CM report	ZCMType	Num	8	1. If ZType=F then missing 2. If ZType=C then a. 1=Physical abuse only b. 2=Neglect only c. 4=Sexual abuse only d. 5=Emotional abuse only e. 6=No alleged CM f. 7=Sex trafficking only g. 8=Other maltreatment only h. 9=Multiple types of maltreatment i. .=missing	
34	Removal reason for foster care entry related to child abuse or neglect	ZFCReasonCAN	Num	8	3. If ZType=F then a. 1=removed because of child maltreatment including: abandonment, parent drug abuse, neglect, physical abuse, sexual abuse b. 0=otherwise 4. If ZType=C then missing	This variable provides an indicator showing that the reason for removal was related to child abuse or neglect. It is always missing for ZType=C because there was no removal. It may be missing for ZType=F.

Section 5: REFERENCES

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APPENDIX A – Removing and Adding Years

Removing Years

NCANDS files are imported in the section of code labeled “CHILD FILES: INPUT FILE DATA”. Each line imports a specific year’s file. To remove years, two steps are required: 1) Comment out (or delete) lines of code that import unwanted years. For example, if a user wants to only input FY2015-2021 NCANDS data, they would simply comment out lines writing *A2002* through *A2014*. 2) Modify the last line of the section that writes *C* by specifying the imported years in the *set* statement. For example, if a user wants to only input FY2015-2021 NCANDS data, *set A2002-A2021* would be changed to *set A2015-A2021*.

Year-to-year linkages (by state) of all consecutive pairs of NCANDS years are checked in the section “CHILD FILES: GRID OF SUCCESSFUL LINKS YEAR-TO-YEAR USING CHILD IDENTIFER FOR CHILD FILES”, which directly follows “CHILD FILES: INPUT FILE DATA”. Each line corresponds to a pair of consecutive years. Removing imported years from the “CHILD FILES: INPUT FILE DATA” section without removing the respective years’ lines in this section will draw errors from SAS. However, the user can choose to ignore these errors as the program continues to execute subsequent code regardless. If the user wants to avoid these errors, the user can choose to comment out or delete the respective years’ lines of code.

Removing years of AFCARS files follows the equivalent process and is not detailed here. AFCARS files are imported in the section of code labeled “FOSTER CARE FILES: INPUT FILE DATA”. Similarly, the subsequent section, “FOSTER CARE FILES: GRID OF SUCCESSFUL LINKS YEAR-TO-YEAR USING CHILD IDENTIFER FOR FOSTER CARE FILES”, checks successful year-to-year linkage (by state) of all imported AFCARS years.

Adding Years

Newly released NCANDS files (e.g. FY2022) can be added in the section “CHILD FILES: INPUT FILE DATA”. To add a new year, three steps are required: 1) Copy and paste the line of code writing *A2021* into a new line directly below, but before the line writing *C*. 2) Modify the new line to reflect the newly added year (e.g. *data A2021;set c.cf2021v1* would change to *data A2022;set c.cf2022v1*. 3) Modify the line writing *C* by including the newly added year in the *set* statement. For example, *set A2002-A2021* would change to *set A2002-A2022*.

As referenced above, year-to-year linkages (by state) of all pairs of consecutive years of NCANDS years are checked in the section “CHILD FILES: GRID OF SUCCESSFUL LINKS YEAR-TO-YEAR USING CHILD IDENTIFER FOR CHILD FILES”, which directly follows “CHILD FILES: INPUT FILE DATA”. To add a new year, modify the section at the commented lines reading “TODO: ADD LATER YEARS’ …” of each subsection. Example code for new years is provided in the commented lines.

Adding newly released AFCASRS files follows the equivalent process and is not detailed here. Note however, that when inserting a new line in the section “FOSTER CARE FILES: INPUT FILE DATA”, the user must also change the values for variables *FY, FYFirst,* and *FYLast.* For example, if adding FY2022 AFCARS data, the line

data F2021;set f.fc2021v1 ;FY=2021;FYFirst='01OCT2020'd;FYLast='30SEP2021'd;%FCIn;run;

would change to

data F2022;set f.fc2022v1 ;FY=2022;FYFirst='01OCT2021'd;FYLast='30SEP2022'd;%FCIn;run;

APPENDIX B – State/Year linkages over time (NCANDS)

NCANDS Yearly Linking Grid (1 = linkable, 0 = not linkable)
"0506" means "Linkage quality between 2005 and 2006)

	0506	0607	0708	0809	0910	1011	1112	1213	1314	1415	1516	1617	1718	1819	1920	2021
AK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AL	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
AR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AZ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0
CA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
FL	1	0	1	1	0	1	0	0	1	1	1	1	1	1	1	1
GA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IL	0	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1
IN	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
KS	0	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
KY	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1
LA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MD	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1
ME	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MI	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
MN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1
ND	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
NE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NJ	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NV	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OR	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
PA	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
RI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TN	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1
TX	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UT	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1
VA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WV	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

APPENDIX B continued – State/Year linkages over time (AFCARS)

Foster Care Files Yearly Linking Grid (1 = linkable, 0 = not linkable)
"0506" means "Linkage quality between 2005 and 2006)

	0506	0607	0708	0809	0910	1011	1112	1213	1314	1415	1516	1617	1718	1819	1920	2021
AK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
AZ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CT	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
DC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
FL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
GA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ID	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
IN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
KS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
KY	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MD	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ME	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MN	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MO	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MS	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ND	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NJ	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NV	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OK	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SC	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TN	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1
TX	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
UT	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
VT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WA	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WI	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WV	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

APPENDIX C – Restoring Hidden Foster Care Spells (ZPhantom)

We use the term "phantom" to refer to hidden foster care spells in the AFCARS Foster Care Files. Two types of hidden spells, or phantoms, can be identified:

1. First Phantom:

- The removal/discharge dates of a child's first spell may not be stored in the "LatRemDt" (latest removal date) and "DoDFCDt" (discharge date) variables of the first record.
- Instead, these dates can be found in “Rem1Dt” (first-ever removal date) and "DLstFCDt" (previous discharge date).
- The RAPIDS program utilizes these dates to restore the first foster care entry-to-exit spell for such a child.

2. Middle Phantom:

- In cases where a child entered and exited care in one year (Spell 1), entered and exited care again in the next year (Spell 2), and entered care once more in the same year, the Spell 2 removal date may not be explicitly stored.
- The Spell 2 discharge date would be found in the "DLstFCDt" variable.
- Statistically, the Spell 2 removal date would be the midpoint between the first date of the fiscal year and "DLstFCDt." This range is relatively narrow (several months).
- The RAPIDS program interpolates the Spell 2 removal date by assigning this midpoint.

The RAPIDS program restores these first and middle phantoms:

- ZPhantom=1 indicates a restored first phantom, using the “Rem1Dt” and “DLstFCDt” variables.
- ZPhantom=2 indicates a restored middle phantom, using “DLstFCDt” and interpolation.
- ZPhantom=0 indicates a complete foster care spell based on the "LatRemDt" and "DoDFCDt" variables and is not a restored hidden spell.