Child Care and Development Fund
ACF-801 Case-Level Data Submission Guidelines

Technical Bulletin #5
Revised: January 21, 1998

I. Introduction

Before submitting their first ACF-801 report, States must inform ACF whether they will (a) report data for all CCDF families (full population reporting) or if they will (b) submit a systematic random sample representing the State's monthly CCDF caseload (monthly sample reporting). States reporting their full CCDF population must send a **Letter of Intent** to ACF by February 28, 1998. States choosing to submit monthly samples must submit an **Annual Sampling Plan** to ACF by February 28, 1998. These documents are described in this Technical Bulletin. Examples of each of these documents are also included in Appendices I and II. A glossary of commonly used terms and a sampling plan worksheet are included in Appendices III and IV.

States must also inform ACF whether or not they separate CCDF funds from non-CCDF funds. States who pool CCDF funds with non-CCDF funds are required to report families served by all child care funds. States using a pooled method must also report the percentage of dollars that each fund contributes to the total funds for child care. This is a requirement of all States regardless of the type (population or sample) of data they choose to submit. (Note: CCDF funds are the following State and Federal funds--discretionary, mandatory, State and Federal matching, MOE, and transfers from TANF. Non-CCDF funds include funds such as Title XX, State funds not used for match, and others.)

II. Population Submissions

States may choose to report their entire caseload of all families served by the CCDF program each month, instead of a monthly sample.

States that choose to submit their entire monthly CCDF caseload, are required to submit a **Letter of Intent** indicating their intent to report data for their entire CCDF population. If States pool CCDF funds with non-CCDF funds, they must report the percentages of dollars that each fund contributed to the total used for child care.

The **Letter of Intent** must include the following information (See Appendix I for an example):

- The State's intent to submit entire monthly CCDF caseloads;
- The proportional contribution of all non-CCDF funds to the entire CCDF reporting pool, if a pooled child care fund is used.
- The interval between each monthly submission (one per month or three monthly submissions per annual quarter); and
- The name, telephone number, and e-mail address (if available) of at least one State contact person.

III. Sample Submissions

States that choose to submit monthly samples of approximately 200 cases, instead of their entire CCDF caseload, must follow standard sampling methodology to ensure the integrity of their samples.

1.   Sample Methodology-Overview

The sample methodology must conform to principles of probability sampling. That is, each family in the CCDF caseload must have an equal probability of being selected. A sample frame, which is an unduplicated list of all families currently served by CCDF funds, must be constructed for each month. The monthly sample may be submitted each month or three monthly samples may be submitted together on a quarterly basis. Approximately one-twelfth (n = 200) of the required minimum annual sample size (n = 2,400) must be selected from each monthly sample frame.

2.   Systematic Random Sampling

Systematic random sampling is the preferred method for CCDF purposes. This method provides a system for selection of an individual unit from a file, list, or computer tape at equally spaced intervals (such as every 10th, 140th, 950th, etc., to obtain the desired sample size). The starting point within the first interval is determined by random selection. A starting point can be selected with a random numbers table or automated procedure that can randomly select numbers. The sampling interval is determined by dividing the estimated average monthly caseload by the required average monthly sample size (n = 200). For example, if your estimated average monthly caseload were 22,232, the sampling interval (22,232 / 200) would be 111. Every 111th case would be drawn from the sample frame to obtain the monthly (approximately n = 200) sample. This number is approximate since as the monthly population fluctuates, so too will the final outcome of the systematic random sample. If you pull every 111th case from a population that is a little more or less than the average of 22,232, the actual monthly sample size increases or decreases slightly.

A worksheet is attached in Appendix IV to assist States with the steps and procedures for determining their average monthly caseload and sampling interval.

3.   Sampling Frame

A sampling frame is an unduplicated list of families served by CCDF funds. Each sampling frame must include families served by CDDF Federal and State funding streams, including mandatory and discretionary funds transferred from TANF, federal and State matching and State MOE funds.

4.   Annual Sample Size Requirement

The minimum required annual sample size for families receiving assistance is 2,400. This minimum sample size will provide reasonably precise estimates, with a precision of about plus or minus 2 percentage points, for an attribute of .5 at a 95% confidence level. To assure proportional representation for the whole fiscal year, States will have to report approximately 200 cases (one-twelfth of the annual sample size) each reporting month.

5.   Sampling Plan

Each State must submit for ACF approval to the Regional Administrator an **Annual Sampling Plan** or any changes to the currently approved sampling plan at least sixty (60) calendar days before the start of the reporting period fiscal year (February 28, 1998 for FY98; August 1, 1998 for FY99). If the State's sampling plan is unchanged from the previous year, the State is not required to resubmit a new one. The annual sampling plan must include the following components (see Appendix II for an example of a State Annual Sampling Plan):

a.   Documentation of methods for constructing and maintaining the sample frame(s), including an assessment of frame completeness and any potential problems associated with using the sample frame(s);

b.   Documentation of methods for selecting the sample cases from the sample frame(s);

c.   The estimated average monthly caseload for the annual sample period and the computed sample interval to the ACF Regional Administrator thirty (30) calendar days before the beginning of the annual sample period (March 2, 1998 for FY98, September 1, 1998 for FY99).

d.   States that use a pooled method to construct their sampling frame (the pooled fund includes both CCDF funding streams and non-CCDF funding streams) must report to ACF the percentage contribution of each funding stream of the total CCDF for each reporting month.

e.   States that choose to submit records monthly rather than quarterly must inform the Child Care Bureau about their intentions in the annual sampling plan.

6.   Weighting Sample Data

Thirty days prior to the end of the annual reporting period (September 1, 1998 for FY98, and September 1, 1999 for FY 99) States must submit the (actual) total number of families receiving assistance under the State CCDF program for each month in the annual sample period. This number should equal the total number of cases included in each monthly sample frame. This data is required for weighting the sample results in order to produce estimates for the entire caseload.

IV.   Summary of Due Dates

Documentation	Components	Due Date FY98 and FY 99	Send to:
Sampling Plan	• Describe sampling frame • Document sampling methodology	FY98: 2/28/98 FY99: 8/1/98	ACF Regional Office
Additional due dates for States who submit samples--*Prior to first report period*	• Average monthly caseload • Sample Interval	FY98: 3/2/98 FY99: 9/1/98	ACF Regional Office
Additional due dates for States who submit samples--*Before end of report period*	• Actual monthly number of families receiving CCDF funds	FY98: 9/1/98 FY99: 9/1/99	ACF Regional Office
Letter of Intent	• Describe sampling frame	FY98: 2/28/98 FY99: 8/1/98	ACF Regional Office

February 28, 1998

Regional Administrator
ACF Regional Office
2222 Main Street Suite 600
City A, State A 99999

Dear:

The State of A will submit entire monthly populations, instead of sample data, to fulfill the requirements of the CCDF federal child care reporting guidelines. Our State uses a pooled universe comprised of both CCDF and non-CCDF funds. Our pool consists of the following: CCDF funds (80%), Title XX funds (9%), and JTPA funds (11%). We will submit the monthly populations on a quarterly basis.

If you have any questions about the information contained in this letter, please contact Elizabeth Joehawkawitz, Chief of the MIS and Reporting Division at (599) 599-9999.

Sincerely,

Child Care Administrator

APPENDIX II
Annual Sampling Plan

Example

In accordance with the federal subsidized child care reporting requirements, the State of A (the State) has prepared a Sampling Plan which describes 1) the methods used for constructing and maintaining the State's sampling frames and 2) documentation of the methods used for drawing monthly samples.

1. Methods Used for Constructing and Maintaining the Sampling Frames

Scenario A

The State currently does not maintain a single electronic file consisting of all unduplicated families served by CCDF funds. Because the State maintains 14 county-based systems, monthly *sampling frames* will be a compilation of the lists from all 14 systems.

The 14 Child Care systems do not use the same case identifiers. Six of the county based systems use the primary caregiver's social security number and 7 use an algorithm that assigns a unique number to each family. One county-based system uses an algorithm that assigns a unique number to each child in care. The name/date of birth sequence resulted in many duplicate records because of variations in the way names are spelled.

In order to minimize duplication, the State will use a single compiled data file from the 14 systems and a SOUNDEX search procedure which matches like sounding character fields/names. SOUNDEX is a Dbase compatible search procedure. Each month the 14 systems will e-mail a data file to the Child Care programs division. The files will be compiled and the SOUNDEX procedure will automatically match like sounding names, identical birth dates, and race categories within and among the 14 files. A match on all three variables (name, birth date, and race category) among at least two cases, will be an indication that a duplicate case exists. The State's Child Care Program Director will investigate and delete duplicate cases from the SOUNDEX list to create the monthly sampling frames. This procedure will be repeated each month so that a new (unduplicated) sampling frame is created for each monthly sample.

<div align="center">**Scenario B**</div>

The monthly sampling frames (a list of all unduplicated families served by CCDF funds) will be provided by the State's Department of Human Resources, which maintains an unduplicated list of all of the families served by CCDF funds in the State. Each month the Department of Human Resources will send an electronic data file to the Child Care Programs Division with the names of all families served by CCDF funds. This unduplicated list will serve as the sampling frame.

2. Documentation of the Methods for Drawing Monthly Samples

<div align="center">**Scenario A**</div>

Sampling Methodology

The State will use a systematic random sampling methodology in which every *kth* case/family is selected from the sampling frame (N = 22,230) to draw the monthly samples (n = 200). An estimate of the monthly caseload was made by averaging the sampling frame values for October 1997, November 1997 and December 1997 (Mean = 22,230 families). The monthly caseload estimate was used to estimate the sampling interval (22,230) 200 = 111.15). An automated procedure, programmed in Access, was created to select every *kth* case, depending on the sampling interval, from the sampling frame to construct the monthly samples. Each month, a random numbers table (Finlay and Agreski 1993) will be used to select a random starting point for case selection.

The State will submit monthly total caseload values and three monthly samples each annual quarter.

Data Collection

The State does not maintain a system that includes CCIS data elements, therefore, data collection/data mapping, will be performed manually by reviewing case files and mapping the case file information to fields in an Access (.mdb) database. All of the information required for federal reporting is included in the case files.

Funds

The State pools CCDF funds with Title XX and private funds. The proportionate contribution of funds from each funding stream is as follows: CCDF funds (80%), Title XX funds (9%), and JTPA funds (11%).

Scenario B

Sampling Methodology

The State will use a simple random sampling methodology to report case-level information to the federal Child Care Bureau. This procedure is equivalent to systematic sampling (i.e. each case/family record has an equal probability of selection). In simple random sampling it is not necessary to select a sampling interval or starting point, because the records are drawn from the sampling frame randomly. Each month an unduplicated list of cases will be created and a sample of the appropriate size (n = 200) will be drawn. The estimated monthly caseload, based on a three month average, is 22,230. Actual monthly caseload values will be submitted along with the monthly submissions each quarter.

Data Collection

We will use an automated procedure to capture and map data elements that are currently collected by the existing automated system. The Department of Human Resources' system currently stores basic demographic information about families served by CCDF funds. These include: race of primary caregiver, gender, age of primary caregiver, ages of children in the family, and type of child care (center-based/home-based). All other CCIS data elements will be collected and mapped manually from case files and entered into the same data file as the existing information.

We will submit monthly *total* caseload values and samples (n = 200) each month to the federal Child Care Bureau.

Funds

The State does not pool CCDF with non-CCDF funds.

Terms/Phrases	Definitions
Letter of Intent	A letter stating an agency's intent to submit full monthly populations. The letter of intent should include the proportional contribution of CCDF and non-CCDF resources included in the total CCDF pool.
Pooled Method Of Funding	States that use the pooled method of funding combine CCDF resources with other non-CCDF resources. States that use the pooled method of funding are required to include the proportional contributions of each funding source to total CCDF funds, in their Letter of Intent or Sampling Plan.
Population	All families and children served by CCDF funds.
Required Minimum Sample Size	Federal child care reporting guidelines require that States submit at least 200 cases per month. When annualized, the 200 cases will equal a sample of n = 2,400 cases. This sample size has a confidence interval of +-2 percentage points.
Probability Sample	A statistically representative group of cases used to approximate population parameters.
Sampling Frame	The (unduplicated) list of cases composing a population.
Sampling Interval	The standard distance between cases selected from a population for a sample.
Sampling Plan	A brief document that describes the methods used for constructing and maintaining the monthly sampling frames and documentation of the methods for drawing monthly samples.
Systematic Sampling	A probability sample in which every *kth* unit in a list is selected for inclusion in the sample.

Step 1: Estimate Average Monthly Caseload for FY 1998

- *Hint: Add each month's estimated caseload together for a total and divide by 12 months. See example worksheet below:*

$$\frac{\text{Total Estimated Caseload}}{12 \text{ months}} = \frac{266784}{12} = \mathbf{22{,}232}$$

EXAMPLE

Month	FY 98 Estimated Monthly Caseloads
October	21125
November	21615
December	23112
January	23023
February	21100
March	21059
April	21795
May	21895
June	23656
July	24063
August	22916
September	21328
Total	266784

STATE

- *Hint: Complete this table for your own State to assist in finding your estimated average monthly caseload.*

STATE: $\dfrac{\text{Total Estimated Caseload}}{12 \text{ months}}$ $\dfrac{\quad\quad}{12} = \boxed{}$

STATE WORKSHEET

Month	FY 98 Estimated Monthly Caseloads
October	
November	
December	
January	
February	
March	
April	
May	
June	
July	
August	
September	
Total	

Step 2: Calculate Sample Interval

EXAMPLE: $\dfrac{\text{Average monthly caseload for 1998}}{\text{Approx. average monthly sample}}$ $\dfrac{22{,}232}{200}$ = 111

STATE: $\dfrac{\text{Average monthly caseload for 1998}}{\text{Approximate average monthly sample}}$ $\dfrac{\rule{2em}{0.4pt}}{200}$ [ ]

Step 3: Randomly Select Starting Point
- *Hint: Use SAS/SPSS or table of random numbers. You can ask SAS or SPSS to randomly pick a case to start your sampling process. A random number table is useful when these packages are not available (see next page for instructions and a table). The "randomness" of selecting the starting point is very important for the reliability of the data which is supplied to CCB. Please contact Michael Dubinsky at the Child Care Bureau (202) 401-3442 if you need assistance.*

Step 4: Pull Cases Using the Sampling Interval
- *Hint: Beginning with the starting point selected in Step 4, pick that case and every* Kth *case following depending on your sampling interval selected in Step 2. Be sure to select every* Kth *case of the population without going back over the original starting point. You will have selected approximately 200 cases.*