



A Guidebook For A

Common Methodology

For Determining NDNH-Attributable
Child Support Collections

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Federal Parent Locator Service

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Introduction

A *Guidebook for a Common Methodology for Determining NDNH-Attributable Collections* is designed to provide a set of detailed, step-by-step instructions for estimating annual child support collections attributable to new hire (W-4) or quarterly wage (QW) proactive matches returned to states from the National Directory of New Hires (NDNH). These proactive matches occur after submission of employment information to the NDNH, resulting in an automatic comparison of the data with child support case data in the Federal Case Registry (FCR). After receiving a proactive match, states can issue an income withholding order (IWO). Currently, all 50 States and all four territories, as well as many federal agencies, are regularly submitting employment information to the NDNH.

Why a Common Methodology?

The purpose of calculating an estimate of annual NDNH-attributable child support collections is to quantify the tangible benefits of using proactive matches returned to states by the NDNH. Many states have expressed an interest in quantifying the results at the state level, so employing consistent methodology at the state level allows the broader, national benefits of the system to be demonstrated as well. Information about the results of these data matches over time can be useful for policymakers and managers at both the state and federal levels.

What is Needed to Conduct the Study

- A random sample of NDNH W-4 or QW proactive matches for noncustodial parents (NCPs) for a particular time period, usually a federal fiscal year (FY). In order to generate robust results, the Federal Office of Child Support Enforcement (OCSE) uses a random sample size of 1000 cases for its W-4 collection studies and at least 1500 cases for its QW studies. This sample can be supplied by OCSE upon request.
- Staff to research the child support case events and collection histories for the NCPs in the random sample and to conduct the final calculations.

Guidebook Overview

This guidebook presents:

- A discussion of the characteristics of the random sample
- Step-by-step guidelines for reviewing cases and recording attributable collections
- An explanation of the Formula used for calculating NDNH-attributable collections

Although the guidebook provides detailed information for calculating the benefits of NDNH data, technical support is available by phone or e-mail. For questions regarding the guidebook, please contact Linda Deimeke of the OCSE at 202-401-5439 or via e-mail at linda.deimeke@acf.hhs.gov.

The Sample

OCSE can provide a sample of proactive matches necessary to analyze results and estimate collections. If you have a preference for undertaking the programming necessary to draw the sample from individual systems, however, certain criteria should be addressed during the programming process, as indicated below.

Sample Characteristics

The sample contains individual matches returned on NCPs based on an employer report (W-4 or QW submission). Table 1 lists random sample inclusions and exclusions criteria used by OCSE.¹

Table 1: The Random Sample

Includes:	Excludes:
✓ NCP matches	Custodial parties (CPs) or putative fathers (PFs) matches
✓ NDNH to FCR proactive matches	FCR to NDNH proactive matches Locate request responses
✓ Interstate matches	Intrastate matches
	For QW studies, OCSE also excludes duplicate information being provided on a NCP from the same employer across multiple quarters.

The following provides reasons OCSE excludes certain kinds of matches from its random sample.

CP or PF Matches

Matches on CPs and PFs are not useful for a study focusing on collections, since cases involving these types of participants would not result in an IWO upon receipt of the NDNH data. However, OCSE does include matches sent whether or not they pertain to cases that have a child support order in place, since NDNH to FCR matches do not include an order indicator in the match response. In addition, a case participant may have multiple cases, some with orders established, and others with no order in place.

FCR to NDNH Matches and Locate Request Responses

OCSE excludes FCR to NDNH matches since this would duplicate employment information previously returned to the state upon original submission of employment information. Locate request responses, like the FCR to NDNH matches, duplicate data previously returned. Given this duplication, it is best to use matches returned to the state at the time closest to when the employer first reported the employment information.

¹ For reference, OCSE excludes matches on NCPs protected by the Family Violence Indicator (FVI). Since any match with an FVI is never sent to states, the match would never have been received in the first place. If, in analyzing a sample provided by OCSE, an NCP's case history is flagged as being protected by an FVI, be aware this flag was placed on the individual after the NDNH match was sent.

Intrastate Matches

Most states receive matches from their own State Directories of New Hires (SDNH) before the original employment information is even forwarded to the NDNH for interstate matching. OCSE excludes these intrastate matches from its sample, since collections from such matches would be captured in an SDNH-attributable collections figure.

Please note that in order to ensure sample randomness, these types of matches must be excluded from the universe (the population of records eligible for the sample) before the sample is drawn, rather than from the sample itself after it has been drawn.

If OCSE provides a random sample, the employer address or the employer optional address returned with the proactive match will be provided. In addition, other information about the NCP will be included:

- First, middle, and last name
- State Member ID associated with the participant
- Social Security number (SSN)
- Date of Hire (if provided with W-4 submission)
- Reporting Quarter (QW only)
- Wage amount (QW only)

If OCSE provides a random sample, the quantity of the universe from which the sample was drawn (that is, the total number of records eligible for the sample) will also be provided for analysis purposes.

Analyzing the Sample

Reviewing Cases

After obtaining the sample, each sample match can be reviewed for NDNH-attributable collections. “Attributable” refers to a collection as a direct result of a wage withholding order issued subsequent to the state receiving the W-4 address from OCSE. Provided below are the recommended steps for reviewing cases associated with each NCP match, determining whether a collection should be attributed to the NDNH, and recording appropriate collection data.

1. Locate the NCP’s record by SSN or Member ID. Verify the name and SSN match. The participant’s name may have changed since the match was sent, so the SSN will be the final determinant; an SSN-name mismatch is rare. If this occurs, check whether there was a change to the name or SSN after the match was returned.
2. Since each participant can have more than one case and NDNH collections can be spread over more than one case, it is important to look for multiple cases. Observe how many cases there are for the obligor and verify they are open. If a case is closed, verify it was closed or was pending closure before the NDNH match arrived. If it was closed after the NDNH match arrived, there may still be NDNH-attributable collections that took place prior to case closure. Also, in some instances a participant may be a NCP or a PF in one case, and a CP or even a child in another case. If the NCP is associated with multiple cases, review only those cases where the matched participant is a NCP.
3. Once the appropriate cases have been identified for examination, look in the associated event histories for the NDNH match; verify that it came in and the date that it arrived. Remember that multiple NDNH matches may arrive around the same time, especially for QW matches. Verify which match on the system is the one from the sample and then record the date the match was processed by your system.
4. If no IWO was sent, code the record as “No IWO Sent.” Even if no IWO was sent, it is still valuable to isolate the reason there was no issuance, as this provides information on data usage. There are multiple reasons an IWO may not be issued from a NDNH match, including:
 - Case closed
 - No order
 - Address already known (from the CP or NCP, or from some other source)
 - Pursuing other leads (IWOs submitted to other employers)
 - Medical assistance only (if no IWO would be sent in that particular case)
 - Awaiting Uniform Interstate Family Support Act (UIFSA) processing
 - Wages earned during quarter deemed insufficient (QW only)
 - Already paying from one of the following sources:
 - Personal payments
 - Other IWO
 - UIFSA collections

In order to calculate simple frequencies and percentages of matches that fall into these categories, it is recommended that only one of the above reasons be selected. For example, if the case closed without an order, check the “case closed” box, since this is ultimately the reason the match was not used, even for establishment purposes. If there is a mix of income withholding and UIFSA collections, select the most frequent occurrence or the reason that carries more weight in the case(s) being analyzed. This provides a method for calculating the percentage of all sample matches placed into each discrete category, that is, the same match not coded under more than one category.

5. If an IWO was sent, record the date it was sent and the amount of the IWO obligation, since this information may be useful for later analysis. The IWO may have been issued automatically by the system or initiated later by the caseworker upon review.
6. Review the payment histories for payments that have been recorded for each particular case. It is important to distinguish between payments that are from the specific NDNH IWO being analyzed and payments from other IWOs or sources that are not attributable to that sample address. Each state may use special codes to identify child support collected through income withholdings and may also store the source of individual payments, such as employer identity. If not, other factors must be considered to ensure a collection is attributable to the particular NDNH IWO resulting from the sample match. The following are suggestions for determining whether payments are NDNH-attributable:
 - a. First, examine the case event history, confirm receipt of the NDNH match, and that an IWO was issued to that employer. Review the collection history to see whether payments from that employer started coming in after the IWO was issued. In order to determine whether a collection is from the particular IWO issued due to the NDNH match, look for a Federal Employer Identification Number (FEIN) associated with each payment. If this is not available, look at the date the collections began and ensure they began at a reasonable time after the IWO was sent. There will be individual determination as to what constitutes a “reasonable” amount of time given each state’s own processes and the method used to issue the IWO—some are issued automatically, while others may be issued by the caseworker after reviewing cases in which the automated criteria were not met.

Be certain that the first collections recorded are attributable to the new NDNH IWO, as opposed to a continuation of collections from a previous IWO. Each state system may differ in the kind of detailed information it uses to trace collections and ensure collections are attributable to the NDNH match. Sometimes it may be necessary to examine caseworker notes to determine whether a particular IWO was successful. In addition to using dates to assess whether incoming payments are attributable to the new IWO, some state systems store check numbers associated with each payment. Alterations in amounts, date cycles, or check numbers may be used to differentiate between new NDNH-attributable collections and pre-existing collections from a previous source, as well as determining when the flow of attributable collections cease. Since some

NCPs have more than one job (cases in which the NCP was already making payments, but a new IWO was issued to obtain additional collections), review whether any new payments started from this new source. Collections coming from any source other than the IWO being studied are not NDNH-attributable, even if the payments come from a NDNH employer.

- b. Sometimes an incoming NDNH match will have its employer address overwritten by the address contained in a state's employer table. Even if the IWO is sent to the address provided by your in-state employer table, the collections are still NDNH-attributable, since the IWO was triggered by the NDNH match.
 - c. Be cognizant of IWO collections coming from the "parent company" of the employer to which the IWO was issued. If an IWO is issued to an employer with a name different than the one in the sample, or if there is an IWO collection coming from an employer with a name different than the one to which the IWO was issued, check whether the Employer FEIN is the same.
 - d. If part or all of the NDNH employer address information has been changed or overwritten by the in-state employer table before the IWO was sent, it is possible that a different employer name is shown as the IWO recipient or the source of IWO collections. If it is uncertain whether the NDNH employer and the IWO employer are related, Internet searches on the employer name may provide an answer.
7. If there are NDNH-attributable collections, it may be helpful to print the appropriate payment histories for recording payments from all matches with collections at a later time. See the section on "Recording NDNH-attributable Collections," for suggestions about entering payments once review of the matches is complete. The following are guidelines for examining payment histories:
 - a. For each NCP with a NDNH-attributable collection record the collections for each month. The first month of the collections history (Month 1) is the first calendar month in which a NDNH-attributable payment is received, even if the payment does not reflect what a subsequent full month of payments would be. For example, if the date of the first collection for a NCP is January 25 and subsequent months show weekly or bi-weekly payments, January would be Month 1 even though it reflects only a partial month's payments.
 - b. If there are multiple cases, the monthly payment is derived by adding together all the payments for that month from all cases with NDNH-attributable collections. Month 1 is determined by which case receives the first payment. Although unusual, there may be situations in which a NCP with two cases receives its first attributable payment in January (Case #1) and then Case #2 receives its first attributable payment in February. In this situation, Month 1 for all cases is January; Case #2 would simply not contribute any Month 1 payments, and its first payments would be added to the total for Month 2 (February).
 - c. Miscoding of incoming payments may occasionally occur. Collections identical to the usual IWO amount may be coded under another collection category, such as "personal check," but are received after the IWO was issued, are for identical amounts, and are in the same date cycle as other IWO payments. For instances

where a change in the type of payment is a result of miscoding, consider the payments attributable to the NDNH IWO. If your state system stores the check number associated with a designated payment, it may be easy to differentiate between payment sources.

- d. Be aware of the potential for “payment reversals.” For example, a payment history may show a payment was collected in Month 1, but part or all of that payment was subtracted out at a later date. If this occurs, be sure to correct this and subtract the amount from the month in which the payment was originally entered. Also, some payments may be backdated and need to be counted in the month the payment or reversal should originally have been posted. For instance, a payment received in March and backdated to January should be counted as a January payment.
- e. Be consistent in the dates used for data recording purposes. For example, for each collection there may be both a receipt date and an actual posting date. OCSE uses the receipt date to reflect the true timeframe of the employer’s response to the IWO, as there may be possible delays in posting payments to an account. Whichever date is selected, OCSE recommends using that date consistently as the collection date for all records reviewed.
- f. Please note that in the payment history report there may be several distribution categories, such as current obligations vs. arrears. The payment entered should be the total payment, regardless of its eventual distribution.
- g. If one month passes with no collections, that month is considered “skipped.” Not all NCPs have jobs with paid time off, and this or other absences may cause gaps in payment records. In addition, NCPs working for temporary agencies may have inconsistent payment records, even with an IWO in place. If a month is skipped but the payments resume the following month, mark the missed month “Skipped” and enter the subsequent payments in the appropriate month, provided they result from the original IWO being tracked.
- h. If the payments from the IWO terminate for two or more months, enter “Ceased” in the first month in which collections from the IWO do not take place.
- i. If collections are continuing to come in at the time you are conducting your study, enter “Incomplete” for the month following the last month for which data exists. OCSE has developed survival rates that take complete data from other cases into account to project the probability that payments continued or ceased during the incomplete months. These survival rates are discussed in the section “The Formula,” which presents the calculations for determining total NDNH-attributable collections from the sample.

Recording NDNH-Attributable Collections

The following are suggestions for entering NDNH-attributable payments collected through review of the appropriate child support cases into a collections spreadsheet.

- For each proactive match that resulted in NDNH-attributable collections, create a separate record or row; enter each month’s collections for that record in a separate column; enter up to 12 months of NDNH-attributable collections. Each separate record is

a “hit,” that is, a match with a successful collection: if there are 100 collection records, then there are 100 hits. Dividing this number by the sample size results in the “hit rate” discussed later. Using the spreadsheet’s COUNT function for Month 1 will confirm the number of records with a collection. Table 2 below is an example of a collections spreadsheet showing the first two NDNH matches that resulted in collections. Once you have gone through the cases, you may want to hide columns containing the NCP’s Name, Member ID number, SSN, and employer information; you can keep that information in the event that you want to revisit the case, but hiding the columns saves space when performing the calculations.

Table 2: Example of a Collections Spreadsheet

Proactive Match	Month One	Month Two	Month Three	Month Four	Month Five	Month Six	Month Seven	Month Eight	Month Nine	Month Ten	Month Eleven	Month Twelve
1	=150+40	=120+40	Skipped	120	Ceased							
2	=20	=20*4	=20*3+15	=20*5	=20*4	Incomplete						

- It is suggested that when there are multiple payments within a month, you enter each individual payment, separated by a “+” sign, and let the spreadsheet do the summing of the payments to get the month’s total. This prevents any mistakes in adding the payments on a hand calculator.

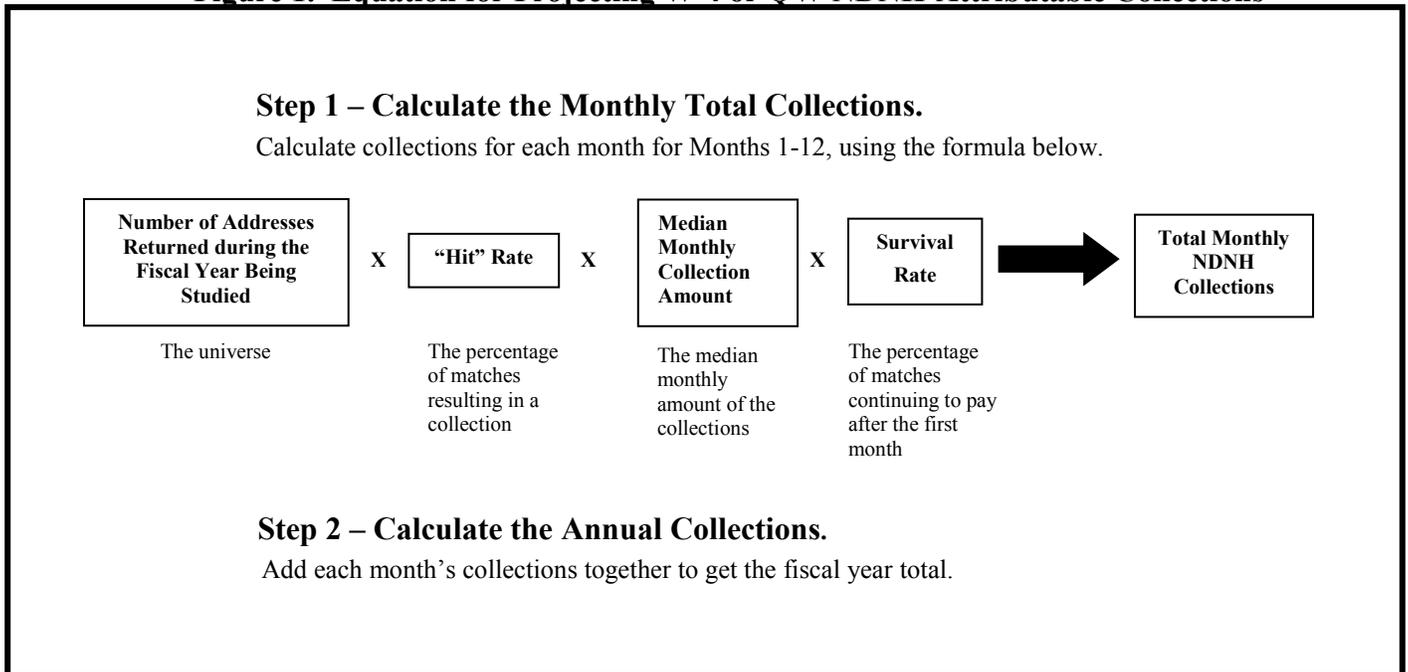
In Match #1 above, if you enter 150+40 and click on the “=” sign in the formula box, the spreadsheet will total the month’s collections to \$190. In addition, if there are frequent payments of the same amount multiple times a month, you can use the “ * ” (multiplication) sign, such as in Match #2. Payments for Month Two are 20*4, which the spreadsheet will calculate as \$80 for the month when you click on the “=”. Additionally, most spreadsheets have a built-in order of operation such that it will always multiply before adding: in Match #2 above, Month Three’s payments of 20*3+15 will equal \$75. Note that in some spreadsheets you must click on the “=” sign in the formula bar, even in months with only one payment, for the spreadsheet to properly interpret the entry as a month’s collection. This is especially important in calculating the number of hits, which, in turn, determines the hit rate.

- If there are multiple cases with NDNH-attributable collections for the same NCP, enter the collections from all the cases into the same NCP record. (It is important to combine a NCP’s NDNH-attributable collections into the same record; creating a new record will create an extra hit when there was, in fact, only one, which will artificially inflate the hit rate.)
- If collections are still being made at the time of your study, and you have less than 12 months of payment history, enter “Incomplete” for the month following the last month for which data exists, as was done in Match #2 above. In such a case, you would use the survival rates provided by OCSE in Table 3 and discussed below.

The Formula

This section describes the statistical formula used to calculate the total collections attributable to the NDNH from the sample. This formula was developed through a collaborative effort of OCSE and state child support staff, and is shown in Figure 1.

Figure 1. Equation for Projecting W-4 or QW NDNH-Attributable Collections



The Components of the Formula

This section provides a description of the various components of the formula and how to calculate them once all NDNH-attributable payments have been entered.

Component 1 – The Number of W-4 or QW Employer Addresses Returned

Component 1 is the total number of W-4 or QW proactive NDNH-FCR employer address matches that were returned to the state during the FY studied. This is the universe of records eligible for the random sample. As mentioned earlier, if you request that OCSE draw your sample, the exact number of the universe will be supplied with the sample itself.

Component 2 – The Hit Rate

The hit rate is the percentage of sample addresses that result in at least one NDNH-attributable child support collection. A “collection” is defined as any dollar amount paid by a NCP that is greater than zero. The hit rate is obtained by dividing the number of hits by the sample size.

Component 3 – Monthly Median Dollar Amount From Collections

Using all the collections entered into the table, as described in the previous section, you can use a spreadsheet’s formula function to calculate the median monthly payment. Be sure the cell references include all the months and records with collections. It is important to use the median, because monthly child support payments can vary widely between cases and even within cases, and the median is less skewed than the “average” by small or large outliers that are unrepresentative of the payment histories as a whole. A median is the middle observation in a series of numbers arranged from smallest to largest. For example, in the series of numbers below...

5, 70, 180, 250, 400, 600, 1500

...the median is “250,” because it is the middle number in the series. A median is not the same thing as an “average” or “mean” and is used to make more precise measures of highly skewed or varied data such as income. For instance, in the numbers above, the average is over 429, while the median is 250, a figure less affected by the smallest and largest amounts that are often unrepresentative of the data as a whole.

Component 4 – The Survival Rate

OCSE has found that, over time, a portion of IWOs stop achieving collections. The survival rate is the percentage of matches with collections continuing to pay after Month 1. There are two methods of calculating survival rates. If you have complete payment histories for all the sample matches that achieved a collection, take the number of collection records in each subsequent month as a percentage of the number of Month 1 collection records. For example, if there were 150 collections in Month 1 and in Month 6 there were only 75 collections, the Month 6 survival rate is 50% (75 Month 6 collections divided by 150 Month 1 collections).

In some cases, collections may have started shortly before you conduct your study. In these situations you may have some cases with incomplete collection histories (in other words, at the time of the study, you don’t know yet if the collections will cease or continue in the future). If that is the case, you must use the estimated survival rates provided in this Guidebook. These estimates have been calculated based on several state studies conducted by OCSE and are based on regression analysis designed to forecast the likelihood of payments over time in situations in which some data points are “censored” (that is, incomplete). Table 3 shows the survival rates for NDNH-attributable W-4 collections in Column 2 and the survival rates for QW collections in Column 3. For both W-4 and QW collections, 100% of the matches have collections in Month 1. By Month 4, however, the likelihood that the NDNH-attributable payments will continue is only 53.0% for W-4 collections. The reasons for the decrease over time may include a change in the NCPs’ job status or a change to the obligation itself (for example, emancipation by the child or children in the case). The QW collections tend to last longer, as evidenced by the Month 4 survival rate of 82.0%. This likely reflects the fact that NCPs successfully located through QW matches are less prone to frequent changes in employment.

Table 3: Survival Rates for W-4 and QW Collections

MONTH NUMBER	W-4 SURVIVAL RATE	QW SURVIVAL RATE
1	100.0%	100.0%
2	80.5%	93.0%

MONTH NUMBER	W-4 SURVIVAL RATE	QW SURVIVAL RATE
3	65.6%	87.0%
4	53.0%	82.0%
5	44.4%	76.0%
6	38.6%	71.0%
7	34.5%	67.0%
8	30.5%	62.0%
9	26.5%	58.0%
10	25.3%	54.0%
11	23.1%	51.0%
12	21.3%	47.0%

The Collections Window

The 12-month window for attributing collections to the NDNH-FCR was established because it was estimated that, on average, it would take that long before the NDNH information would have been available from the next best source, that is, obtaining QW data directly from a State Employment Security Agency (SESA). In addition, the window was designed to assess how NDNH data has changed the enforcement of child support, and in that regard it is important to note that:

1. Interstate W-4 data were never before available on a national basis for child support purposes
2. QW data were available to states prior to the NDNH but were limited in several ways:
 - a. States had to specifically request access to the data for specific obligors, rather than receiving the data automatically
 - b. States were limited in the number of QW records they could request from SESAs
 - c. The matching process took much longer than the process with the NDNH, which matches immediately upon receipt of the QW data. Because of this limitation, by the time obligors were found, they had often changed jobs
 - d. States did not have confidence in the QW data because of these factors, and often the information was not used

Calculating Total NDNH-Attributable Collections

- Once you have entered all the payments and have clicked on the “=” sign in the formula box for each month’s payment, you can use the spreadsheet to calculate the hit rate and median (after ensuring that the cell references used in the formula function do not exclude any months or collection records). You can then calculate the amount of NDNH-attributable collections. An example of a spreadsheet for calculating total collections is shown in Table 4.
- Enter the size of the proactive match universe from which the sample was drawn, the hit rate and median calculated in the collections spreadsheet, and the survival rates for the data type you are studying from the appropriate table shown earlier.
- Multiply the formula components across to calculate the attributable collections for each individual month, and then sum each month’s results at the bottom. The formula calculates the results from an entire year’s NDNH proactive matches for the particular

data type studied, using the sample results as estimators for the universe of matches as a whole.

Table 4. Example of the Final Calculation Spreadsheet

Estimated NDNH Collections					
Month	Number of Addresses Returned by the NDNH During the FY Being Studied	Hit Rate	Median Monthly Collection Amount	Survival Rate	Total Monthly NDNH Collections
1	20,000	11%	\$180.00	100%	\$396,000.00
2	20,000	11%	\$180.00	85%	\$336,600.00
3	20,000	11%	\$180.00	72%	\$285,120.00
4	20,000	11%	\$180.00	61%	\$241,560.00
5	20,000	11%	\$180.00	52%	\$205,920.00
6	20,000	11%	\$180.00	44%	\$174,240.00
7	20,000	11%	\$180.00	38%	\$150,480.00
8	20,000	11%	\$180.00	32%	\$126,720.00
9	20,000	11%	\$180.00	27%	\$106,920.00
10	20,000	11%	\$180.00	23%	\$91,080.00
11	20,000	11%	\$180.00	20%	\$79,200.00
12	20,000	11%	\$180.00	17%	\$67,320.00
Total Annual NDNH-Attributable Child Support Collections					\$2,261,160.00

Conclusion

This approach to determining NDNH-attributable collections has been designed using estimators derived from analyzing a sample, since determining actual NDNH-attributable collections would require that a state program its system to track NDNH-attributable collections. Some states have done so, but others have not had the programming resources available. The methods presented in this guidebook could be used to study SDNH-attributable collections in addition to NDNH-attributable collections, although OCSE has never performed that type of study. If a state chooses to use this guidebook to study SDNH collections, they should be aware that it might be necessary for them to adjust the methods presented here in conducting that type of study. In addition, a state studying SDNH-attributable collections would have to draw the sample of SDNH matches from its own system.

When using the approach discussed in this guidebook, OCSE recommends that you incorporate quality assurance (QA) measures into each stage of your analysis, such as revisiting a portion of the child support cases that were reviewed for NDNH-attributable collections, as well as ensuring that the data entry of the payments is accurate and the final calculations are correct. As part of OCSE's technical support, we are willing to perform an independent QA review of the results of your study. Therefore, please feel free to send your final spreadsheets to OCSE. If you have any questions about the common methodology or this guidebook, please contact Linda Deimeke of OCSE at 202-401-5439 or via e-mail at linda.deimeke@acf.hhs.gov. In addition, if you would like to provide feedback about this guidebook or suggest changes, please feel free to contact us.