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National Juvenile Court Data Archive: Final Technical Report

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Background

Since its inception, the *Juvenile Court Statistics* report series has been the primary source of information on juvenile court activities in the United States. The first *Juvenile Court Statistics* report was published in 1929 and described cases handled during 1927 by 42 courts. At that time, few courts kept statistics or statistical records on the cases they handled. At the request of the Children's Bureau in the U.S. Department of Labor, courts volunteered to complete a statistical reporting card on each delinquency case they handled.

In the mid-1940's, this case-level reporting was determined to be impractical. The primary focus of the reporting system then became aggregate counts of the number of delinquency cases handled by courts with juvenile jurisdiction. Each year, courts were asked to complete a single form that recorded the number of various case types they processed during the previous year. In 1957, the Children's Bureau (by then within the U.S. Department of Health, Education and Welfare) initiated a new data collection program that for the first time in the history of the series enabled the development of national estimates of juvenile court activity. A stratified probability sample of more than 500 courts was constructed. Each court was asked to provide annual aggregate counts of the number of delinquency cases it handled. The statistical integrity of the Children's Bureau sample was difficult to maintain. After a decade, the project adopted a policy of collecting annual case counts from any court that could provide them. National estimates were then generated from this nonprobability sample.

Following the passage of the Juvenile Justice and Delinquency Prevention Act of 1974, the primary responsibility for monitoring juvenile delinquency activities at the Federal level was delegated to the Office of Juvenile Justice and Delinquency Prevention (OJJDP) within the U.S. Department of Justice and OJJDP assumed responsibility for the reporting series. In 1975, the National Center for Juvenile Justice (NCJJ) was awarded a grant by OJJDP to continue the *Juvenile Court Statistics* series. NCJJ agreed to continue the data collection and reporting procedures established by the Children's Bureau.

A critical innovation in the *Juvenile Court Statistics* series occurred with the proliferation of computers in State and local governments during the mid-1970. Many juvenile courts began to develop automated record keeping and statistical reporting systems. These data files contained detailed, case level data on each case disposed. Although the design and structure of the courts' automated information systems varied, the information they collected on juvenile cases was similar. NCJJ developed a strategy for combining these data sets to produce a detailed national portrait of juvenile court activity regarding delinquency and status offense cases, and successfully returned the project to its original objective of producing national estimates based on case-level data. Today, the data submitted to the Archive are derived from very complex information systems and are, thus, more complex to understand and process. The Archive annually collects and processes data on hundreds of thousands of juvenile court cases. Through

Careful processing, automated records from many jurisdictions are combined to produce a detailed national portrait of juvenile court activity.

As a result of using this approach for 40 years, the Archive now houses a sizable collection of automated juvenile court data files that not only support the national estimates but also support the study of a wide range of national and subnational juvenile justice issues. Archive data have been used to explore a broad range of topics, from investigating the effectiveness of juvenile court programs and examining policy developments in individual jurisdictions, to monitoring the impact of legislative changes, and guiding juvenile justice system reform.

Now more than 90 years after the *Juvenile Court Statistics* plan was initiated, the need for general use statistical information on the extent and nature of the delinquency and status offense caseloads nationwide remains. The National Juvenile Court Data Archive, maintained at the National Center for Juvenile Justice, collects these data and prepares the annual *Juvenile Court Statistics* reports.

The primary goal of the project is to collect and disseminate national information and statistics about delinquency and status offenses handled by juvenile courts. Secondary goals are to continue to expand the coverage of reporting court jurisdictions and to increase the quality and timeliness of the data. To accomplish this, the Archive continues to pursue three general objectives: data collection and processing, data use and dissemination, and data quality improvement and technical assistance.

Through *Juvenile Court Statistics* and other related dissemination products (see www.ojjdp.gov/ojstatbb/court/index.html), the Archive answers the following research questions annually: How many delinquency and status offense cases are handled in U.S. juvenile courts? What are the caseload trends? What is the offense profile of the cases processed? Do the volume of cases and offense profiles vary by demographic characteristics? What are the case processing characteristics of the cases handled? Does case processing vary by demographic characteristics? What case disposition options are associated most often with which offenses and demographic characteristics? What is the extent of disproportionality in case handling of minority youth? What is the extent of gender disparity in case handling? Over the years, Archive data have also been used to understand the handling of American Indian/Alaska Native youth in juvenile courts, juvenile court careers and patterns of offending, female offenders in juvenile courts, case handling of Hispanic youth, the impact of the type of legal representation on case processing, the factors that are associated with judicial waiver to criminal court, and the relationship between size of jurisdiction and court caseload and processing characteristics, among other things.

The information below regarding unit of count, reporting sample and some recent changes to the estimates is drawn from the *Easy Access to Juvenile Court Statistics* data analysis tool which is developed and maintained by the project and presents national estimates of delinquency case processing. The *Juvenile Court Statistics* reports include an appendix that

presents detailed information on the methods used to produce the national estimates (imputation and weighting procedures) and data source information that is updated for each new year of data. In addition, the influence of nonresponse bias in the estimation procedure is documented in an appendix to this technical report. Those interested in obtaining research data files from the Archive will find additional information on the [Archive website](#).

Unit of Count

In measuring the activity of juvenile courts, one could count the number of offenses referred; the number of cases referred; actual filings of offenses, cases, or petitions; the number of disposition hearings; or the number of youth handled. Each "unit of count" has its own merits and disadvantages. The unit of count used in *Juvenile Court Statistics* is the number of "cases disposed."

A "case" represents a youth processed by a juvenile court on a new referral regardless of the number of law violations contained in the referral. A youth charged with four burglaries in a single referral would be represented by a single case. A youth referred for three burglaries and referred again the following week on another burglary charge would contribute two cases, even if the court eventually merged the two referrals for more efficient processing.

The fact that a case is "disposed" means that a definite action was taken as the result of the referral — i.e., a plan of treatment was selected or initiated. It does not mean a case was necessarily closed or terminated in the sense that all contact between the court and the youth ceased. For example, a case is considered to be disposed when the court orders probation, not when the term of probation supervision is completed.

Reporting Sample

The sample of juvenile courts that provide data to the *Juvenile Court Statistics* series varies each year. Most courts in the sample provide detailed information on each delinquency case they handled in the year. Other courts are only able to provide an aggregate count of their delinquency caseloads with no detail on case characteristics. The following table describes the samples.

The national estimates presented in the *Juvenile Court Statistics* reports were generated with data from a large nonprobability sample of juvenile courts. Consequently, statistical confidence in the estimates cannot be mathematically determined. Although statistical confidence would be greater if a probability sampling design were used, the cost of such an effort has long been considered prohibitive. Secondary analysis of available data is the best practical alternative for developing an understanding of the Nation's juvenile courts. Those interested in a more detailed description of this estimation procedure are encouraged to review the method section of *Juvenile Court Statistics*.

Delinquency Case Sample, 1985–2019

| Year of Disposition | Number of Cases | | Jurisdictions reporting | States reporting | Juvenile population represented |
|---------------------|---------------------------|---------------------|-------------------------|------------------|---------------------------------|
| | With detailed information | In aggregate courts | | | |
| 1985 | 595,413 | 102,193 | 1,579 | 31 | 63% |
| 1986 | 623,864 | 88,738 | 1,544 | 29 | 63% |
| 1987 | 626,015 | 116,345 | 1,634 | 31 | 66% |
| 1988 | 649,104 | 112,284 | 1,630 | 32 | 66% |
| 1989 | 621,564 | 118,123 | 1,539 | 31 | 64% |
| 1990 | 625,232 | 114,174 | 1,478 | 32 | 63% |
| 1991 | 636,621 | 163,270 | 1,546 | 32 | 64% |
| 1992 | 702,464 | 157,489 | 1,573 | 33 | 64% |
| 1993 | 803,266 | 135,131 | 1,765 | 34 | 68% |
| 1994 | 906,205 | 142,239 | 1,805 | 36 | 70% |
| 1995 | 993,577 | 166,833 | 1,973 | 37 | 73% |
| 1996 | 1,104,715 | 100,080 | 2,057 | 38 | 75% |
| 1997 | 1,148,393 | 103,225 | 2,073 | 38 | 76% |
| 1998 | 1,094,970 | 106,985 | 2,177 | 40 | 77% |
| 1999 | 1,058,923 | 97,223 | 2,194 | 40 | 77% |
| 2000 | 1,105,894 | 63,937 | 2,280 | 41 | 78% |
| 2001 | 1,114,710 | 64,681 | 2,285 | 41 | 79% |
| 2002 | 1,133,470 | 67,031 | 2,396 | 43 | 82% |
| 2003 | 1,113,628 | 64,287 | 2,268 | 41 | 81% |
| 2004 | 1,190,940 | 59,123 | 2,385 | 42 | 85% |
| 2005 | 1,189,874 | 40,599 | 2,401 | 42 | 85% |
| 2006 | 1,182,623 | 47,857 | 2,388 | 41 | 85% |
| 2007 | 1,198,755 | 42,899 | 2,386 | 41 | 86% |
| 2008 | 1,189,745 | 43,886 | 2,414 | 42 | 86% |
| 2009 | 1,090,445 | 37,601 | 2,416 | 42 | 86% |
| 2010 | 992,319 | 42,192 | 2,412 | 42 | 86% |
| 2011 | 900,236 | 40,975 | 2,398 | 42 | 86% |
| 2012 | 821,831 | 37,580 | 2,388 | 42 | 86% |
| 2013 | 739,979 | 33,115 | 2,402 | 42 | 86% |
| 2014 | 688,710 | 29,723 | 2,403 | 42 | 86% |
| 2015 | 656,980 | 25,329 | 2,483 | 43 | 87% |
| 2016 | 614,211 | 25,865 | 2,493 | 44 | 87% |
| 2017 | 563,810 | 56,080 | 2,509 | 44 | 87% |
| 2018 | 537,678 | 50,239 | 2,511 | 44 | 88% |
| 2019 | 513,719 | 38,717 | 2,492 | 44 | 87% |

Status Offense Case Sample, 1985–2019

| Year of Disposition | Number of Cases | | Jurisdictions reporting | States reporting | Juvenile population represented |
|---------------------|---------------------------|---------------------|-------------------------|------------------|---------------------------------|
| | With detailed information | In aggregate courts | | | |
| 1985 | 42,298 | 1,395 | 1,488 | 29 | 57% |
| 1986 | 46,347 | 2,017 | 1,472 | 27 | 57% |
| 1987 | 43,083 | 3,818 | 1,561 | 29 | 61% |
| 1988 | 44,457 | 4,187 | 1,562 | 30 | 61% |
| 1989 | 45,599 | 4,049 | 1,548 | 30 | 59% |
| 1990 | 49,244 | 3,936 | 1,487 | 31 | 58% |
| 1991 | 50,007 | 5,972 | 1,555 | 31 | 58% |
| 1992 | 54,426 | 5,313 | 1,564 | 31 | 60% |
| 1993 | 63,626 | 7,186 | 1,751 | 32 | 63% |
| 1994 | 72,267 | 7,185 | 1,814 | 35 | 65% |
| 1995 | 84,566 | 7,655 | 1,971 | 35 | 68% |
| 1996 | 103,732 | 5,602 | 1,994 | 36 | 68% |
| 1997 | 111,510 | 6,603 | 2,003 | 36 | 69% |
| 1998 | 121,981 | 9,313 | 2,111 | 38 | 70% |
| 1999 | 124,624 | 8,849 | 2,105 | 38 | 70% |
| 2000 | 133,131 | 14,457 | 2,155 | 39 | 72% |
| 2001 | 129,676 | 14,751 | 2,152 | 39 | 72% |
| 2002 | 139,577 | 14,657 | 2,261 | 41 | 75% |
| 2003 | 132,344 | 16,387 | 2,134 | 39 | 74% |
| 2004 | 129,185 | 14,558 | 2,250 | 40 | 78% |
| 2005 | 135,118 | 5,315 | 2,268 | 40 | 78% |
| 2006 | 141,955 | 8,844 | 2,254 | 39 | 78% |
| 2007 | 144,112 | 7,243 | 2,254 | 39 | 80% |
| 2008 | 138,478 | 6,006 | 2,283 | 40 | 80% |
| 2009 | 122,525 | 4,107 | 2,285 | 40 | 80% |
| 2010 | 108,717 | 4,464 | 2,281 | 40 | 80% |
| 2011 | 97,947 | 5,211 | 2,266 | 40 | 80% |
| 2012 | 97,517 | 5,072 | 2,255 | 40 | 80% |
| 2013 | 88,880 | 3,688 | 2,271 | 40 | 80% |
| 2014 | 79,848 | 3,365 | 2,270 | 40 | 79% |
| 2015 | 79,894 | 4,857 | 2,344 | 41 | 81% |
| 2016 | 75,800 | 3,522 | 2,338 | 41 | 81% |
| 2017 | 70,188 | 3,758 | 2,255 | 39 | 77% |
| 2018 | 65,729 | 3,629 | 2,258 | 39 | 78% |
| 2019 | 61,317 | 3,402 | 2,240 | 39 | 78% |

Publications/Data Analysis Tools Resulting from the Project

During the project period (10/1/18-3/31/22), the project produced the following publications. All published documents are available on OJJDP's website at www.ojjdp.gov/ojstatbb/publications/StatBB.asp.

Reports

Hockenberry, S., and Puzzanchera, C. 2021. *Juvenile Court Statistics 2019*. Pittsburgh, PA: National Center for Juvenile Justice.

Hockenberry, S., and Puzzanchera, C. 2020. *Juvenile Court Statistics 2018*. Pittsburgh, PA: National Center for Juvenile Justice.

Hockenberry, S., and Puzzanchera, C. 2019. *Juvenile Court Statistics 2017*. Pittsburgh, PA: National Center for Juvenile Justice.

Bulletins

Puzzanchera, C. and Hockenberry, S. Forthcoming. Patterns of Juvenile Court Referrals of Youth Born in 2000. *Juvenile Justice Statistics National Report Series Bulletin*. Washington, DC: OJJDP.

Fact Sheets

Hockenberry, S. 2022. Delinquency Cases in Juvenile Court, 2019. *Juvenile Justice Statistics National Report Series Fact Sheet*. Washington, DC: OJJDP.

Hockenberry, S. 2021. Delinquency Cases Waived to Criminal Court, 2018. *Juvenile Justice Statistics National Report Series Fact Sheet*. Washington, DC: OJJDP.

Hockenberry, S. 2020. Delinquency Cases in Juvenile Court, 2018. *Juvenile Justice Statistics National Report Series Fact Sheet*. Washington, DC: OJJDP.

Hockenberry, S. 2019. Delinquency Cases in Juvenile Court, 2017. *Juvenile Justice Statistics National Report Series Fact Sheet*. Washington, DC: OJJDP.

Data Snapshots

Puzzanchera, C., and Hockenberry, S. 2021. *Trends and Characteristics of Delinquency Cases Handled in Juvenile Court, 2019*. Washington, DC: OJJDP.

Hockenberry, S. and Puzzanchera, C. 2019. *Characteristics and Trends of Delinquency Cases Resulting in Probation*. Washington, DC: OJJDP.

Hockenberry, S. and Puzzanchera, C. 2019. *Characteristics of Cases Judicially Waived from Juvenile Court to Criminal Court*. Washington, DC: OJJDP.

Puzzanchera, C. and Hockenberry, S. 2019. *Characteristics of Delinquency Cases Handled in Juvenile Court in 2017*. Washington, DC: OJJDP.

Statistical Briefing Book

Sickmund, M., Sladky, A., and Kang, W. 2021. *Easy Access to Juvenile Court Statistics: 1985-2019*. Online. Available: <https://www.ojjdp.gov/ojstatbb/ezajcs/>.

Sickmund, M., Sladky, A., and Kang, W. 2020. *Easy Access to Juvenile Court Statistics: 1985-2018*. Online. Available: <https://www.ojjdp.gov/ojstatbb/ezajcs/>.

Sickmund, M., Sladky, A., and Kang, W. 2019. *Easy Access to Juvenile Court Statistics: 1985-2017*. Online. Available: <https://www.ojjdp.gov/ojstatbb/ezajcs/>

Hockenberry, S., Smith, J., and Kang, W. 2021. *Easy Access to State and County Juvenile Court Case Counts, 2019*. Online. Available: <https://www.ojjdp.gov/ojstatbb/ezaco/>.

Hockenberry, S., Smith, J., and Kang, W. 2020. *Easy Access to State and County Juvenile Court Case Counts, 2018*. Online. Available: <https://www.ojjdp.gov/ojstatbb/ezaco/>.

Hockenberry, S., Smith, J., and Kang, W. 2019. *Easy Access to State and County Juvenile Court Case Counts, 2017*. Online. Available: <https://www.ojjdp.gov/ojstatbb/ezaco/>.

OJJDP Statistical Briefing Book. Online. Available: <https://www.ojjdp.gov/ojstatbb/court/>.



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The Influence of Nonresponse Bias in Juvenile Court Case Estimates Produced by the National Juvenile Court Data Archive

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Nonresponse Bias in Juvenile Court Case Estimates

Bias is the difference between an estimate and the actual population value. Nonresponse bias associated with an estimate consists of two components—the amount of nonresponse and the difference in the estimate between the respondents and nonrespondents. The best way to avoid bias for traditional surveys is to improve response rates by using methods such as intensive refusal conversion techniques, incentives, multiple modes of data collection, flexible scheduling, and interviewer training. The National Juvenile Court Data Archive (Archive) cannot reasonably employ all these strategies, but nevertheless has managed to improve its data coverage. However, despite best efforts, nonresponse does occur. While it may not be possible to get an exact measure of the bias, nonresponse bias analyses form an integral part of the overall assessment of data quality.

Some of the Archive's nonresponse is caused when a state does not have a data system that captures case-level data on its delinquency and status offense cases. Several states do not have statewide systems that capture detailed case-level data. On occasion, a state may have a data system, but does not have the capability to extract data to submit to the Archive either because of a lack of staff resources or a technical inability. In some states, the Archive has identified one or more counties that are able to contribute data. The strategy is used sparingly, since data processing costs are the same whether the file is for an entire state or a single county.

The Archive's estimates are not based on a probability sample, thus its weight adjustments are not probability-based but are based on the population characteristics of nonresponding jurisdictions. In weighting case records to produce estimates, an assumption is made that the responding counties are similar to the nonresponding counties. The procedure used is similar to that used by the FBI and BJS to produce arrest estimates (described in the Methods tab of the Arrest Data Analysis Tool <http://www.bjs.gov/index.cfm?ty=datool&surl=/arrests/index.cfm>). The Archive's estimation procedure is described in detail in the methods section of *Juvenile Court Statistics* (see <https://ojjdp.ojp.gov/library/publications/juvenile-court-statistics-2019>).

Evaluation of the bias in the Archive's estimates is difficult because the true value of the population parameter is unknown. A nonresponse bias analysis can quantify the estimated nonresponse bias and identify potential sources of nonresponse bias on estimates. Nonresponse bias analyses serve as an indicator of the quality of the data collected and can help reassure data users, as well as the agency collecting and releasing data, of the quality of the data available.

Methods for Analyzing Nonresponse Bias

Several accepted methods for analyzing nonresponse bias are appropriate for the Archive's national estimates released through the *Juvenile Court Statistics* reports and Easy Access to Juvenile Court Statistics.

| Analysis Method | Description and Feasibility | Question Answered |
|---|--|---|
| Examination of response rates | <p>The NCES standard is that any overall response rate less than 70% requires a nonresponse bias analysis.</p> <p>The Archive's response rate can be viewed in several ways</p> <ul style="list-style-type: none"> - population coverage, - proportion of counties reporting data included in the analysis, - item nonresponse (missing data). | Is there enough nonresponse to cause concern? |
| Comparison of survey estimates to external estimates | <p>Estimates from a survey are compared to estimates from other sources.</p> <p>Historically, the Archive has compared estimates of "cases referred by law enforcement" with FBI data on "arrests referred by law enforcement to juvenile court." However, those data are no longer well reported in the FBI's UCR sample.</p> | Are the estimates reasonable? |
| Comparison of respondents to nonrespondents on other factors | <p>Another way to identify those responders who are most 'like' the nonresponders is to compare them on variables thought to be related to the variables being estimated.</p> <p>The Archive can compare counties on any number of variables included in Census data collections or perhaps FBI arrest rates (there are also nonresponding counties).</p> | Are responders similar to nonresponders on factors related to the estimates? |
| Comparison of 'early' responders to 'late' responders | <p>One way to identify those responders who are most 'like' the nonresponders is to compare early to late responders. The key assumption in such an approach is that later responders to a survey are more similar to nonresponders than are earlier respondents.</p> <p>The Archive could instead compare better vs. weaker information systems. We can also look at the impact of fewer responders on the estimates.</p> | Are early responders similar to late responders (and presumably nonresponders)? |
| Follow-back surveys | <p>Follow-back surveys are designed to collect at least some key or critical variables either from all or a randomly selected sample of nonrespondents.</p> <p>The Archive does seek out aggregate case counts from jurisdictions unable to provide detailed data. These aggregate case counts are incorporated into the estimates, but could be analyzed separately</p> | Are responders different than nonresponders? |
| Comparison of estimates using base and nonresponse adjusted weights | <p>Examine estimates using both the base and nonresponse adjusted weights. If there are large differences, it is possible that the adjustment did indeed reduce the bias in estimates. If there are no differences, it is possible that the original respondent sample was not very different from the nonrespondents, and so there was not much bias at the start.</p> <p>The Archive can conduct such analyses, but doing so will have an impact on the production schedule.</p> | What is the effect of nonresponse adjustments? |

Methods Currently Used by the Archive

Examination of response rates—overall response rate/data coverage. The National Center for Education Statistics (NCES) requires a nonresponse bias analysis for any collection

with an overall response rate below 70%. Applying this threshold to the Archive shows that the Archive achieves above 70% across most measures of response rate or coverage.

The Archive’s estimation procedure uses both case-level and county aggregate data. Delinquency case data are reported by jurisdictions representing more than 80% of the population of youth ages 10 through upper age and status offense data are reported by jurisdictions representing 77% of the population ages 10 through upper age. As a percentage of counties, the figures are a bit lower, but exceed the 70% threshold except when considering the “case-level data only” for status offense cases (67%). The proportions are similar when considering states as the reporting unit (76% for delinquency cases and 73% for status offense cases).

| 2019 Delinquency Data | | | | | | | |
|--------------------------|------------------|----------|--------------------|---------------------|------------------------|---------------------|-----------------------|
| Stratum | County 10-17 pop | Counties | Reporting counties | | | | |
| | | | Case level | Percent of counties | Case level + aggregate | Percent of counties | Percent of population |
| Total | | 3,142 | 2,261 | 72% | 2,492 | 79% | 87% |
| 1 | <14,020 | 2,674 | 1,896 | 71 | 2,096 | 78 | 80 |
| 2 | 14,020—51,200 | 324 | 246 | 76 | 270 | 83 | 84 |
| 3 | 51,201-123,400 | 109 | 88 | 81 | 93 | 85 | 87 |
| 4 | >123,400 | 35 | 31 | 89 | 33 | 94 | 96 |
| 2019 Status Offense Data | | | | | | | |
| Stratum | County 10-17 pop | Counties | Reporting counties | | | | |
| | | | Case level | Percent of counties | Case level + aggregate | Percent of counties | Percent of population |
| Total | | 3,142 | 2,122 | 68% | 2,237 | 71% | 77% |
| 1 | <14,020 | 2,674 | 1,792 | 68 | 1,896 | 71 | 72 |
| 2 | 14,020-51,200 | 324 | 223 | 69 | 232 | 72 | 72 |
| 3 | 51,201-123,400 | 109 | 77 | 71 | 79 | 72 | 75 |
| 4 | >123,400 | 35 | 30 | 86 | 30 | 86 | 89 |

The Archive’s estimation procedure groups counties by population quartiles. Whether one considers the response percentage as either the percentage of counties reporting or the percent of the population covered by reporting jurisdictions the Archive achieves 70% reporting or better. Applying the National Center for Education Statistics standard that requires nonresponse bias analysis whenever an overall response rate is less than 70% would mean that no nonresponse bias analysis is required.

Examination of response rates—item nonresponse. Gross item response proportions across the sample of jurisdictions contributing data used in the estimations are shown in the table below, which is included as part of table A-3 in the Methods appendix of the *Juvenile Court Statistics* report.

| Percentage of reporting sample providing variables used in <i>Juvenile Court Statistics</i> | | | | | | | | | |
|--|-----------------|--------|------|-----------------|-----------------|------------------|--------------------|--------------|-------------|
| Data Year | Age at referral | Gender | Race | Referral source | Referral reason | Secure detention | Manner of handling | Adjudication | Disposition |
| 2019 | 98% | 98% | 94% | 77% | 96% | 60% | 100% | 93% | 85% |
| 2018 | 98 | 98 | 94 | 77 | 96 | 59 | 100 | 94 | 85 |
| 2017 | 98 | 98 | 94 | 77 | 96 | 59 | 100 | 93 | 84 |

The most missing variable is secure detention, followed by referral source, followed by disposition. These higher item missing variables suffer from what we refer to as “format missing” meaning that the data format submitted to the Archive simply does not contain the variable. For example, some of the Archive’s data providers do not have detention information that is tied to a specific case if the youth is involved in multiple cases or the data provider may only be able to provide detention admissions. Others do not have dates of detention that allow us to determine whether the detention was between referral to court and disposition. And others simply do not have detention information in their information systems at all. For this reason, Archive staff have targeted specific jurisdictions to include detention information with their submission, which will reduce the item missing for detention substantially. Table A-3 in the Methods appendix of the *Juvenile Court Statistics* report indicates which states are format missing for which variables (they are indicated by “-” cell entries).

Comparison of survey estimates to external estimates. In the past the Archive routinely made comparisons between its estimates of delinquency cases referred by law enforcement and the FBI’s reported data on disposition of juvenile arrests, specifically arrests referred to juvenile court. The FBI, unfortunately, no longer distinguishes arrests referred to juvenile court. Instead they distinguish arrests handled within the department from other dispositions which include all of the following lumped into one group: turned over to juvenile court, probation department, welfare agency, other police agency, and criminal adult court. Thus, comparison to the FBI’s disposition of juvenile arrests is no longer feasible.

Comparing Archive data on delinquency cases in which the youth was ordered to residential placement following adjudication to estimates from the CJRP on youth committed to residential placement following adjudication may also shed some light. The comparisons can’t be made directly because the Archive estimates are annual and the CJRP estimates are 1-day counts. Looking at demographic characteristics for selected offenses categories shows that the profiles are remarkably similar (table below). Broader offense categories (e.g., delinquency, aggravated assault) have somewhat less similar profiles than the more narrow categories, but even so all are within 5 percentage points.

Similarly, comparing Archive data on delinquency cases in which the youth was securely detained between referral to court and disposition to estimates from the Census of Juveniles in Residential Placement (CJRP) on youth detained in a locked facility awaiting adjudication or

disposition may shed some light on bias in two of the variables with higher item missing percentages. Again, the comparisons can't be made directly because the Archive estimates are annual and the CJRP estimates are 1-day counts. Although the detention variable is arguably the weakest variable for the Archive's estimates, here too, the data show that the two data sources produce estimates with similar characteristics.

| 2019 Data | CJRP 1-Day Count Committed Youth | Archive Annual Count Cases Placed | CJRP 1-Day Count Detained Youth | Archive Annual Count Cases Detained |
|----------------------------|---|--|--|--|
| Delinquency | | | | |
| Percent male | 86% | 84% | 83% | 78% |
| Percent black | 38 | 43 | 43 | 40 |
| Percent 16-years-old | 24 | 28 | 27 | 28 |
| Robbery | | | | |
| Percent male | 94 | 91 | 94 | 90 |
| Percent black | 61 | 63 | 60 | 63 |
| Percent 16-years-old | 21 | 30 | 26 | 30 |
| Aggravated assault | | | | |
| Percent male | 87 | 82 | 82 | 77 |
| Percent black | 44 | 42 | 45 | 42 |
| Percent 16-years-old | 23 | 27 | 31 | 25 |
| Burglary | | | | |
| Percent male | 93 | 95 | 91 | 92 |
| Percent black | 49 | 51 | 48 | 47 |
| Percent 16-years-old | 26 | 25 | 24 | 25 |
| Motor vehicle theft | | | | |
| Percent male | 82 | 85 | 86 | 81 |
| Percent black | 42 | 50 | 45 | 48 |
| Percent 16-years-old | 29 | 31 | 28 | * |
| Drugs | | | | |
| Percent male | 80 | 84 | 83 | 81 |
| Percent black | 22 | 28 | 30 | 27 |
| Percent 16-years-old | 26 | 31 | 32 | 35 |

* Too few cases to obtain a reliable percentage.

If the Archive's estimates suffered from substantial bias caused by nonresponse, one would expect a significantly greater difference between the profiles stemming from the Archive and those from CJRP data.

Possible Additional Methods

Compare respondents to nonrespondents on other factors. Another means of assessing bias would be to compare jurisdictions on variables that are available for both respondents and nonrespondents from other data sources and are associated with the estimates being assessed. Archive data used as part of the estimation procedure are collected at the county

level. The project does not receive data from all possible counties; in 2019, we received some type of delinquency data from 79% (nearly 2,500 counties) of all counties in the U.S. We can evaluate bias in the sample by comparing the characteristics of counties in our reporting sample on factors associated with delinquency to those not in the sample. For example, we can evaluate the racial composition of the reporting sample with non-participating jurisdictions to determine if our sample over (or under) represents particular subgroups, such as African-American youth. Such a comparison could be expanded to include other factors associated with delinquency, such as poverty (which is available at the county level), and arrest estimates (county level data is not available for all counties).

The analysis would provide a better understanding of the ways in which the responding counties are similar and different from the nonresponding counties. This information might be able to be used to make adjustments to the estimation procedures and nonresponse weighting.

Comparing ‘early’ respondents to ‘late’ respondents. An analysis that compares responses of early responders to those of late responders is intended to determine whether substantial differences exist between the two that would hint at substantial differences between responders and nonresponders. The basic assumption is that late responders are similar to nonresponders. The Archive can make such a comparison but for the Archive a more meaningful analysis might be to compare submissions from “better” versus “weaker” information systems. It would also be possible to test the impact of fewer submissions on the estimates to determine whether there is a coverage/response rate threshold that must be achieved (below which the estimates are unstable or obviously biased).

Follow-back surveys. The Archive routinely gathers critical case counts from nonresponding jurisdictions. County-level aggregate counts of petitioned and nonpetitioned delinquency and status offense cases are pulled from state or county annual statistical reports or websites. The Archive incorporates these aggregate case counts into the estimation procedures, but they could also be analyzed separately to compare case rates with fully responding counties and national estimates. Conducting additional analyses using these aggregate data that are part of the Archive’s routine data collection would not require a great deal of additional work. Additional efforts could be taken to obtain critical counts from a sample of nonresponding jurisdictions, but this would involve substantial effort and thus cost.

Comparison of estimates using base and nonresponse adjusted weights. This type of analysis is intended to determine the effects of nonresponse adjustments. For the Archive this would require writing a substantial amount of new code to create estimates that do not adjust for nonresponse. Not only would a substantial amount of effort/cost be involved, but it would delay the production schedule as it would involve a substantial amount of programmer time. Taking this course of action would need to be weighed against what additional information would be learned from doing so.

Next Steps

The relative priority of the possible additional analyses must be weighed against the priority of improvements to timeliness in the development of annual estimates. The additional cost factors associated with the additional analyses for a grant with limited funding must also be

considered. Funds diverted for additional analyses to occur would harm the core tasks associated with data collection, processing and distribution. Therefore, at this time no additional analyses beyond those currently employed are planned.