



Research NOTES

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Analyzing Drug and Chemical Offense Data

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This issue of Research Notes describes how the Commission collects and reports information on drug and chemical variables available in the individual datafiles, and discusses analytical issues that may arise when using this data.

The United States Sentencing Commission ("the Commission") is an independent agency in the judicial branch of the federal government. The Commission's primary responsibility is to promulgate and amend the federal sentencing guidelines. The Commission has other responsibilities, including (1) establishing a data collection, analysis, and research program to serve as a clearinghouse and information center for the collection, preparation, and dissemination of information on federal sentencing practices; (2) publishing data concerning the sentencing process; (3) collecting and disseminating information concerning sentences actually imposed and the relationship of such sentences to the factors set forth in 18 U.S.C. § 3553(a); and (4) collecting and disseminating information regarding the effectiveness of sentences imposed.¹ To meet these responsibilities, the Commission receives and collects data from sentencing documents sent directly from the federal courts.²

This publication explains how the Commission collects and reports information on the drug and chemical variables available in the Commission's individual datafiles. In addition, it discusses analytical issues that may arise when using the Commission's data.³ The key variables in the Commission's individual datafile are noted in all capital letters inside of brackets throughout the text.

Office of Research and Data

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Research Notes give background information on the technical details of the Commission's data collection and analysis process. They are designed to help researchers use the Commission's datafiles by providing answers to common data analysis questions. **Helpful links:**



Commission Website
<https://www.ussc.gov>



Interactive Data Analyzer
<https://ida.ussc.gov>

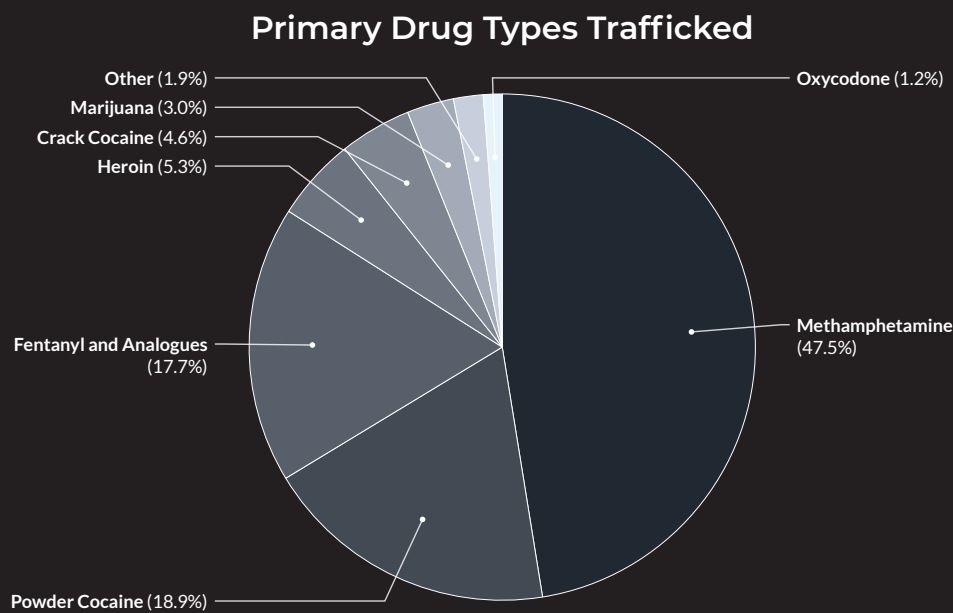


Judiciary Sentencing Information
<https://jsin.ussc.gov>

Introduction

Drug offenses⁴ are one of the most prevalent types of crime in the federal criminal justice system, accounting for 29.6 percent of all cases reported to the Commission in fiscal year 2023.⁵ Drug trafficking penalties are usually based on the type and weight of the drug(s) involved in the offense, so these variables are of particular interest to researchers.⁶ Most of the information about the drug types and weights involved in a case are detailed in the Pre-Sentencing Report (PSR).⁷ The offense conduct

section of the PSR details what events transpired during the duration of the criminal activity, according to law enforcement sources.⁸ For the guideline computations in the PSR, the probation officer reports the final amounts of drugs for which the sentenced individual was held responsible and the Base Offense Level (BOL) to which that amount corresponds.⁹ The Statement of Reasons document (SOR) details any changes to the BOL, drug weight, etc., made at sentencing.¹⁰



SOURCE: U.S. Sentencing Commission's FY 23 Quick Facts on Drug Trafficking Offenses.

Drug Type and Amount

The Commission's individual datafile contains information about the type of drugs for which a sentenced individual was held accountable. In some cases, the sentenced individual possesses or sells multiple types of drugs. The variable [NODRUG] records the number of drug types for which each sentenced individual is held accountable. Because some individuals are held accountable for multiple types of drugs, the Commission's data contains several "drug type" variables [DRUGTYP1-DRUGTYPX].¹¹ The drug types [DRUGTYP1-DRUGTYPX] for which an individual is found responsible are ordered on the datafile starting with the drug type with the highest converted drug weight,¹² thus the "primary" drug type, is recoded as [DRUGTYP1].¹³ The Commission has

assigned values for over 100 categories of drug types that are routinely captured with the drug type variables [DRUGTYP1-DRUGTYPX].¹⁴ When a sentenced individual is held accountable for a drug type that does not have a value designated, the value of "77" is used for "other" drug type. There is a corresponding text variable [DESCRIP1-DESCRIPX] to record any "other" drug types that are involved in a case.¹⁵ The Commission also creates a collapsed version of the [DRUGTYP1] variable, grouping "like" drug types together in [COMBDRG2].¹⁶ For example, Methamphetamine encompasses Methamphetamine Mix, Methamphetamine Actual, Ice, and Methamphetamine pre-cursors, similarly, Marijuana includes Hashish and Marijuana Plants. The Commission generally reports out this collapsed variable [COMBDRG2] as the "primary" drug type in its publications.

For each drug type [DRUGTYP1-DRUGTYPX], the Commission datafile also has corresponding variables for the drug weight [DRGAM1-DRGAMX] and unit of measurement [UNIT1-UNITX] recorded.¹⁷ For ease of analysis, the Commission datafiles also have a set of variables [WGT1-WGTX] which have converted all the weights to the same unit of measurement, grams.¹⁸ The gram weight equivalency variable [WGT1-WGTX] obviates the need for researchers to perform a mathematical conversion to standardize weights, making analytic comparison easier to perform.

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On rare occasions, the BOL does not match the drug type and amount reported. The Commission flags these cases with a variable [DRUGPROB] which researchers may want to use to screen out cases where the drug type, drug weight, or the BOL may not be correct.

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When multiple drug types are involved, the guidelines require the court to convert the weight of each drug type to a “converted drug weight,” which is based on the ratio of that drug type to a standard weight.¹⁹ The combined total of the converted drug weights for all the drugs in the case are then used to determine the guideline range for that case. The Commission datafiles include a set of “converted drug weight” variables [MWGT1-MWGTX]. These variables enable researchers to perform an “apples-to-apples” comparison of each drug weight expressed as the converted drug weight equivalent amount in grams. Finally, the Commission datafiles contain a total converted drug weight equivalent amount (*i.e.*, all the drug weights added together) which represents the “total drug weight” [MWEIGHT].²⁰

It is worth noting that the exact drug amount is not missing from some cases.²¹ In those cases, the drug weight is reported in a range (*e.g.*, “Less than 5 grams,” “At most 50KG,” or “6-7 ounces”) in the PSR and plea agreement. In this scenario the specific drug weight values [DRGAM1-DRGAMX] will be missing.²² The Commission datafiles include a set of range variables which capture the lower limit of the range [DAFROM1-DAFROMX] and the upper limit [DATO1-DATOX] in these cases. These variables should be used with the unit of measure variables

[DUFROM1-DUFROMX and DUTO1-DUTOX]. Note that some ranges will be filled in for both the lower and the upper limit, while others will only have the lower limit (*e.g.*, “at least 5 grams” will appear in the Commission datafile as a value of “5” in the lower amount limit) or only the upper range limit recorded (*e.g.*, “at most 50 grams” will appear in the Commission datafile as a value of “50” filled in for the upper amount limit). Range amounts are included in the total drug weight variable [MWEIGHT] and used to determine the primary drug type [DRUGTYP1].²³

The drug type, drug weight, and the BOL should match with the information on the Drug Quantity Table in §2D1.1. On rare occasions, the BOL listed in the PSR does not match with the drug type and amount reported. The Commission flags these cases with a variable [DRUGPROB] which researchers may want to use to screen out cases where the drug type, drug weight, or the BOL may not be correct.

To most accurately capture the court’s findings, the final offense level [XFOLSOR] and criminal history category [XCRHISSR] along with any additional guideline application information (*e.g.*, BOL, Specific Offense Characteristics (SOCs), etc.) and criminal history details provided on the Statement of Reasons document (SOR) are compared to the Pre-Sentence Report (PSR).²⁴ This comparison is the basis for the variable [SOURCES]. [SOURCES] indicates whether the underlying guideline application information and criminal history details that make up the final offense level [XFOLSOR] and the criminal history category [XCRHISSR] reported on the datafile is based upon known court findings. It is desirable when doing a guideline-based analysis to only include cases in which the final court findings are available (*i.e.*, the guideline application and criminal history application are both documented clearly at the time of sentencing). Selecting only cases where the [SOURCES] variable is “Court Findings” ensures that the guideline application variables of interest (*e.g.*, BOL, SOCs, criminal history points, etc.) were documented as being applied or not applied. Any guideline-based analysis involving data fields which may change between the PSR and the SOR (*e.g.*, BOL, SOCs, drug amount, or criminal history points) may have data inconsistency issues if the [SOURCES] screen is not utilized. Most Commission publications limit analyses to where the [SOURCES] variable is “Court Findings” when analyzing data such as drug weight and BOLs. Researchers should generally utilize the [SOURCES] variable in guideline-based analyses to only keep cases designated as “Court Findings” to minimize data inconsistencies.²⁵



Researchers can identify sentenced individuals who received relief from a mandatory minimum penalty by reviewing specific variables in the Commission's individual datafile.

Drug Mandatory Minimum Variables

Drug Trafficking offenses have mandatory minimum penalties associated with both specific drug types and specific drug amounts, which are delineated in 21 U.S.C. §§ 841 and 960.²⁶ Whether a sentenced individual is subject to a mandatory minimum penalty for drug trafficking can impact the final sentencing guideline range. The Commission collects information on the applicable drug mandatory minimum penalty in the [DRUGMIN] variable. For sentenced individuals convicted under more than one drug trafficking count of conviction with a mandatory minimum penalty, the highest one is recorded in [DRUGMIN].²⁷

There are special consecutive drug penalties in methamphetamine cases with convictions under 21 U.S.C. § 860A or 21 U.S.C. § 865. These penalties are recorded in the variable [METHMIN]. There is also an indicator variable [ISMETHMIN] to identify sentenced individuals with either 21 U.S.C. § 860A or 21 U.S.C. § 865 as one of the statutes of conviction. It is important to note that the total penalties in [METHMIN] are consecutive and added to any other drug mandatory minimum penalties in the variable [DRUGMIN].²⁸ If researchers do not want to include these consecutive methamphetamine penalties, cases where [ISMETHMIN] equals one should be excluded from the analysis.²⁹ Because the consecutive methamphetamine penalties can have any value up to the statutory maximum (as compared to the “standard” drug penalties of 60, 120, 180, and 300 months (post-First Step Act³⁰)), the Commission excludes these cases when breaking out the length of drug trafficking penalties.³¹

Individuals who are convicted of an offense carrying a mandatory minimum penalty³² may receive relief from those penalties at sentencing via one of two methods. If a sentenced individual provides the government with substantial assistance in the investigation or prosecution of another person who has committed an offense, the

government can recommend a sentence below the mandatory minimum penalty by filing a motion under 18 U.S.C. § 3553(e). The guidelines account for this assistance in §5K1.1 of the *Guidelines Manual*.³³ The second method by which persons can be sentenced below a drug mandatory minimum penalty is via the “safety valve” provision. Congress enacted this provision in 1994 to allow non-violent drug sentenced individuals with limited (or no) criminal history to obtain relief from drug trafficking mandatory minimum penalties. The statutory safety valve provision is found at 18 U.S.C. § 3553(f). Sentenced individuals who meet the qualifications for the safety valve, as defined in §5C1.2 of the *Guidelines Manual*, are eligible to be sentenced without regard to any mandatory minimum penalty. Those individuals also are eligible for a two-level reduction in their offense level determined under §2D1.1 (Drug Trafficking) or §2D1.11 (Chemicals and Precursors).³⁴ All individuals sentenced for drug trafficking who meet the conditions of the safety valve provision are eligible for the two-level “guideline” safety valve reduction, regardless of whether the offense of conviction carried a drug mandatory minimum penalty.³⁵

Researchers can identify sentenced individuals who receive relief under either (or both) the substantial assistance or safety valve provisions by reviewing specific variables in the Commission's individual datafile. Sentenced individuals who received a reduction under §5K1.1 (substantial assistance) can be identified using the variable [SENTRNGE].³⁶ Sentenced individuals who received a safety valve reduction can be identified by either [SAFETY] or [SAFE], depending on the exact research question.³⁷ Note that the variable [DRUGMIN] still records the drug mandatory minimum for the individual even when relief from the mandatory has been granted.

Drug Trafficking Base Offense Level Options

The drug trafficking guideline (§2D1.1) has several options for determining a sentenced individual's Base Offense Level (BOL).³⁸ The drug trafficking quantity table is used to determine the BOL for most drug trafficking cases, unless the defendant is convicted of an offense that establishes death or serious bodily injury.³⁹ The BOL line number [BASLNHI] and labels [BASELHI] detail which BOL options are being selected. BOL line numbers [BASLNHI] one through four apply to specific BOLs based on offense conduct and statutory convictions regarding death or serious bodily injury. Line number five includes all sentenced individuals whose BOL is determined via the drug trafficking quantity table. [BASELHI] identifies which subsection or label of the BOL was applied, if applicable (some BOLs do not have subsections).

One BOL option which may be of specific interest to researchers is the Mitigating Role Cap. The Mitigating Role Cap decreases the BOL for sentenced individuals who received a decrease in their offense level because they had a lesser role in a drug conspiracy.⁴⁰ There is an indicator variable, [MITCAP], to indicate which drug trafficking sentenced individuals received the Mitigating Role Cap. Additionally, specific identifying labels (values B1-B4) for the BOL labels for the primary sentencing guideline [BASELHI] under BOL line number [BASLNHI] value "5" will specify which specific BOL provision of the Mitigating Role Cap was applied. If a researcher is using the BOL as a "proxy" for the drug weight, the Mitigating Role Cap cases would need to be either removed from the analysis or the original/pre-Mitigating Role Cap BOL would need to be determined (when possible), otherwise the assigned drug weight would be incorrect.⁴¹

§2D1.1 Drug Trafficking Base Offense Levels (BOL)

BOLs range from 6 to 43



(a)(1)-(4)

Death or Serious Bodily Injury

Convicted of an offense under certain statutes to which a mandatory minimum penalty relating to death or serious bodily injury applies, or the parties stipulate to such an offense or base offense level.

(a)(5)

If Not, Use Drug Quantity Table

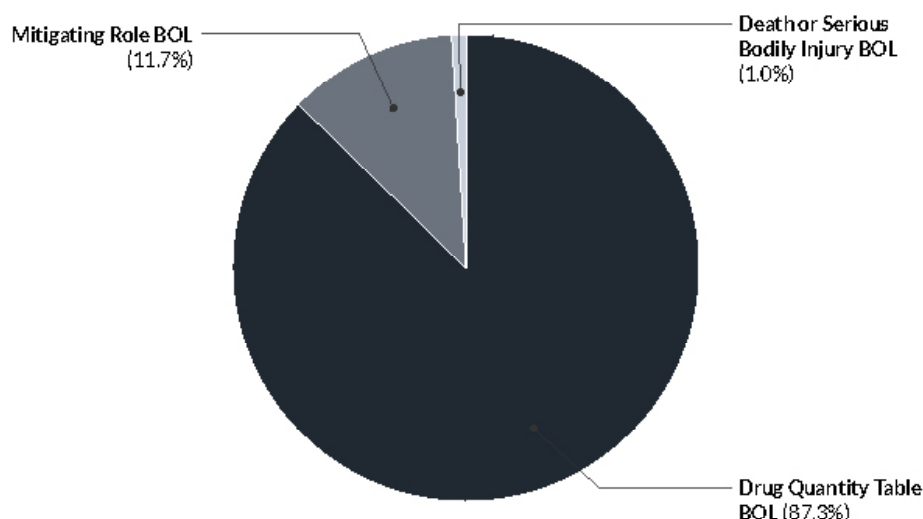
Base offense level specified in the Drug Quantity Table.

(a)(5)(B)

Mitigating Role Adjustment

Base offense level specified in the Drug Quantity Table and mitigating role or minimal participant received.

Frequency of Application of §2D1.1 (Drug Trafficking) Base Offense Levels



SOURCE: U.S. Sentencing Commission's FY 23 Guideline Application Frequency Data Report.

Weapon Variables

In the federal criminal justice system, there are two different ways a sentence can be enhanced when individuals possess or use a weapon in connection with a drug crime. The first is for the prosecutor to charge the sentenced individual with 18 U.S.C. § 924(c), which provides for a specific mandatory penalty for possessing a weapon during the commission of a crime of violence or a drug trafficking crime.⁴² That statute provides that the mandatory penalty section 924(c) must run consecutively to any penalty for the underlying crime.⁴³ The variable [GUNMIN1] records the total value (in months) of all consecutive mandatory minimum penalties associated with counts of conviction under 18 U.S.C. § 924(c). There is also an indicator variable [IS924C] which identifies any sentenced individual who was convicted of at least one count of 18 U.S.C. § 924(c).⁴⁴ The mandatory minimum penalties associated with this count of conviction will be imposed consecutive to any penalties for the underlying drug trafficking crime.

The other way that an individual is punished for possessing or using a weapon in a drug offense is through an enhancement to the guideline range that is determined under the drug trafficking guideline (§2D1.1) and the chemical manufacturing guideline (§2D1.11). There is an SOC in both guidelines that adds two offense levels when a dangerous weapon is possessed in connection with the offense.⁴⁵ There are two variables on the Commission's datafiles which identify when courts have applied the weapon SOC. The variable [WEAPSOC] is used if any of the computations in a case involve the §2D1.1 weapon SOC (regardless of whether this computation was the "highest" or most serious computation).⁴⁶ The variable [WEAPSCHI] is like [WEAPSOC], however, it only indicates if there is an SOC enhancement for a weapon present in the primary sentencing guideline [GDLINEHI]. Most cases involving a weapon will have a value under the statutory weapon variable [GUNMIN1] or the guideline weapon variable [WEAPSOC or WEAPSCHI], but not both.⁴⁷ The Commission datafile also includes an indicator variable [WEAPON] to identify cases that have either a section 924(c) conviction or the guideline weapon SOC.

Chemical Types and Amounts

In addition to collecting information about drug cases, the Commission datafile contains information about listed chemicals. Generally, sentenced individuals involved in selling or possessing listed chemicals are sentenced under §2D1.11.⁴⁸ The Commission's individual datafile contains information about the type of chemicals for which the sentenced individual was held accountable. An individual can be held accountable for multiple types of chemicals; therefore, the Commission's data contains several "chemical type" variables. The chemical types [CHEMTYP1-CHEMTYPX] are not ordered on the datafile based on the chemical type with the highest weight, but rather are entered in the order in which they are listed in the PSR. The Commission has a numeric value specified for each of the most common chemical types [CHEMTYP1-CHEMTYPX]. However, if the sentenced individual is held accountable for a chemical type that does not have a value designated, then the value of "77" for "other" chemical type is used. There is a corresponding text field [CHEMDES1-CHEMDESX] to record the name of any "other" chemical types that are involved in a case.⁴⁹ For each chemical type [CHEMTYP1-CHEMTYPX], the Commission datafile also has a corresponding weight [CHMAM1-CHMAMX] and unit of measurement [CUNIT1-CUNITX] recorded.⁵⁰ Because the rules are different for cases involving multiple chemicals (compared to cases involving multiple drugs), no equivalency chemical variables exist on the Commission's datafile.⁵¹

The Commission's individual datafiles are available for download in SAS or SPSS formats along with the corresponding codebook describing the variables and values at <https://www.ussc.gov/research/datafiles/commission-datafiles>. For any data related questions, please contact us at askORD@ussc.gov. To keep current with new Commission news and publications, please follow the Commission on [X @theusscgov](https://twitter.com/theusscgov).

Endnotes

1 The United States Sentencing Commission is an independent agency in the judicial branch of the federal government. Established by the Sentencing Reform Act of 1984, its principal purposes are (1) to establish sentencing policies and practices for the federal courts, including guidelines regarding the appropriate form and severity of punishment for sentenced individuals convicted of federal crimes; (2) to advise and assist Congress, the federal judiciary, and the executive branch in the development of effective and efficient crime policy; and (3) to collect, analyze, research, and distribute a broad array of information on federal crime and sentencing issues. 28 U.S.C. § 995(a)(12)–(20).

2 The Commission collects information for every federal felony and Class A misdemeanor offense sentenced each year. Sentencing courts are statutorily required to submit five sentencing documents to the Commission within 30 days of entry of judgment in a criminal case, including (1) the charging document; (2) the plea agreement; (3) the Presentence Report; (4) the Judgment and Commitment Order; and (5) the Statement of Reasons form. 28 U.S.C. § 994(w)(1). For more information about the datafile collection process at the Commission, see CHRISTINE KITCHENS, U.S. SENT'G COMM'N, RESEARCH NOTES: COMMISSION COLLECTION OF INDIVIDUAL OFFENDER DATA (2019). Commission materials cited herein are available on the Commission's website at www.ussc.gov.

3 The Commission's individual datafiles from FY2002 forward are available for download, along with the codebook describing all the available variables and values. See U.S. Sent'g Comm'n, *Commission Datafiles*, <https://www.ussc.gov/research/datafiles/commission-datafiles> (last visited Sept. 3, 2024). Note that not all variables mentioned in this paper exist for all the years of data collected by the Commission. Please consult the codebook for information about variable and value changes over time.

4 The Commission's "Type of Crime" [OFFGUIDE] variable has separate codes/values for drug trafficking and simple possession cases. Figure 2 in the 2023 *Sourcebook of Federal Sentencing Statistics* includes both trafficking and simple possession cases in the "Drugs" category. U.S. SENT'G COMM'N, 2023 SOURCEBOOK OF FEDERAL SENTENCING STATISTICS fig.2 (2024) [hereinafter 2023 SOURCEBOOK]. The Commission datafile contains information about the type and weight of the drugs involved (when available) for both drug trafficking and simple possession cases.

5 *Id.* at tbl.4.

6 The statutory drug trafficking penalties are found in section 841 of title 21 of the United States Code. See 21 U.S.C. § 841(b). The federal sentencing guidelines reflect the statutory penalty structure of penalizing certain drugs more than others, as well as penalizing sentenced individuals who are held accountable for a higher drug weight. U.S. SENT'G COMM'N, GUIDELINES MANUAL §2D1.1 (Nov. 2024) [hereinafter USSG].

7 When the PSR status is "waived/not received," the plea agreement (if applicable) is reviewed to determine the type and weight of drugs involved in the offense. However, if both documents are not received, the type and weight of the drug likely will be missing.

8 The probation officer works with the prosecutor and law enforcement officials from various agencies (Drug Enforcement Administration (DEA), Federal Bureau of Information (FBI), etc.) to write the PSR for the sentencing judge to review prior to sentencing. The information in the PSR provides the sentencing judge with an idea of the individual's conduct and a sense of the individual's level of involvement in conspiracy cases.

9 For more information about how the guidelines are computed in a drug case, see U.S. SENT'G COMM'N, PRIMER ON DRUG OFFENSES (2024). For more information about the guideline application variables on the Commission's individual datafile, see U.S. Sent'g Comm'n, *Research Notes*, <https://www.ussc.gov/research/datafiles/research-notes> (last visited Oct. 15, 2024).

In the Commission's individual datafile, drugs are only recorded if they are part of the guideline computation (*i.e.*, the sentenced individual is held accountable for that drug). As an example, if a person was arrested for committing a fraud offense and a marijuana cigarette was found in the person's possession, but they were not charged with drug possession and the PO did not compute a guideline computation from the simple possession guideline, then the case would not include any drugs. Similarly, if the sentenced individual committed a drug trafficking offense, selling heroin and fentanyl, but had a Xanax in his pocket and the PO did not include the Xanax in the total drug weight computation, the Xanax would not be one of the drug types coded.

10 If the SOR details all the changes such that both the guideline computations and the criminal history can be reconciled to the final offense level (FOL) and Criminal History Category (CHC) on the SOR, then the changes are recorded in the datafile. However, if the SOR does not provide enough information, then the variable [SOURCES] notes that there is a mismatch between the PSR and SOR and then PSR details are recorded on the datafile. An example would be if the PSR said the sentenced individual was held accountable for selling 3KG of heroin under §2D1.1, had a BOL of 32, +2 levels for a weapon, and received -3 levels for acceptance of responsibility and had a FOL of 31. However, the SOR has a FOL of 29 and the "Chapter Two changes box" is marked, but the change (it could be the BOL or the +2 for the weapon) is not specified. In this scenario, the BOL and the +2 for the weapon from the PSR computation would remain coded as "32" and "2", respectively on the datafile; however, the FOL [XFOLSOR] would be recorded as 29, and [SOURCES] is recorded as a "mismatch". In this scenario, the datafile would show the calculation details as BOL "32" + "2" for weapon SOC - 3 for acceptance. The FOL is coded as "29" in the datafile (from the SOR), not the expected "31" based on the math from the PSR details.

11 The "X" denotes the largest number of drug types in a given fiscal year for a single individual. For example, in the FY2023 datafile, [NODRUG] reports that one sentenced individual was held accountable for 17 drug types. Therefore, in the FY2023 datafile, the variables for type of drug are [DRUGTYP1 – DRUGTYP17].

12 See *infra* p. 3 and note 19.

13 If there are multiple drugs involved in a case, and one of the weights is missing, then that drug will be recorded as one of the ancillary drug types. An example of this would be if the probation officer held a sentenced individual responsible for 10G of marijuana and only cited a "small baggie" of a substance that tested positive for heroin. The "primary drug type" [DRUGTYP1] would be marijuana and the heroin would be recorded as [DRUGTYP2] because the weight is missing. If all the drug types involved in a case have the weights missing in the documentation, then the drug type with the lowest value of [DRUGTYP1] becomes the primary drug (*i.e.*, the value for powder cocaine is "1" and the value for marijuana is "4" so if both drugs are involved in a case and both have missing weights, then the case is reported out as a powder cocaine case because powder cocaine is the primary drug type).

14 The drug types with values are generally the listed drugs in §2D1.1 Application Note 8(D) of the *Guidelines Manual*. USSG §2D1.1, comment. (n.8(D)).

15 If multiple "other" drugs are involved, the name of each drug is typed into the text field (*i.e.*, one text field may contain the names of several "other drug types").

16 An example of the collapsed values is the [COMBDRG2] category called "Methamphetamine." This category includes the [DRUGTYP1] values of methamphetamine mixture, methamphetamine actual, ICE, methamphetamine pre-cursors, phenylacetone-P2P, ephedrine, and pseudoephedrine. Combining all these precursors and types of methamphetamine together makes it easier to report out the total number of "methamphetamine" cases.

17 The unit of measurement is recorded in whatever measurement is provided in the PSR. Examples of the types of units recorded include grams, kilograms, ounces, pounds, and "plants" for some marijuana cases.

18 These values are derived by converting the weight to grams. For example, if a sentenced individual was sentenced for 20 pounds of marijuana as the only drug type involved, then [DRUGTYP1] value is “4” for marijuana, the drug amount [DRGAM1] is 20 and the unit [UNIT1] is a value of “3” for pounds. The 20 pounds is converted to grams (1 pound = 453.6 grams), so the gram weight [WGT1] would be 9,072. In some cases, the Commission cannot convert the unit provided in the PSR; the corresponding gram weight [WGTX] field will be missing in these cases. Examples of units that cannot be converted are “pills” that do not provide the weight of the pill, “marijuana cigarettes,” and a “baggie.”

19 Section §2D1.1(c) of the *Guidelines Manual* states “‘Converted Drug Weight’ for purposes of this guideline, refers to a nominal reference designation that is used as a conversion factor in the Drug Conversion Tables set forth in the Commentary below, to determine the offense level for controlled substances that are not specifically referenced in the Drug Quantity Table or when combining differing controlled substances.” USSG §2D1.1(c)(Note K). Originally, this conversion was referred to as the “marijuana equivalency,” but was changed in the *Guidelines Manual* in recent years to the terminology “converted drug weight.” USSG App. C, amend. 808 (effective Nov. 1, 2018). However, the process is the same—the probation officer determines the marijuana equivalent weight of each of the drugs that a sentenced individual is held accountable for by using the drug conversion tables in §2D1.1. An example is a sentenced individual who is held accountable for 150G of crack cocaine and 2KG of powder cocaine. The conversion ratio for crack cocaine is 1G = 3,571G of marijuana, therefore, 150G of crack is equal to 535,650G of marijuana or “converted drug weight.” The conversion ratio for powder cocaine is 1G = 200G of marijuana, so 2KG (2,000G) of powder is equal to 400,000G of marijuana or “converted drug weight.” The total converted drug weight for this sentenced individual would be 535,650G + 400,000G = 935,650G. This would result in BOL 28 using the §2D1.1 Drug Quantity Table. The BOL for each individual drug amount would have been 26, but when the amounts were added together, the sentenced individual received an additional two levels based on the combined weight.

20 Note that if there are multiple drugs involved in a case and one or more weights are missing, the “total” converted drug weight [MWEIGHT] may have a valid value which is the total for the drugs involved which *do* have a valid drug weight.

21 In the FY2023 individual datafile, for cases where the primary sentencing guideline was drug trafficking (§2D1.1), running a frequency of the drug weight for the primary drug type [DRGAM1] reveals that of the 18,640 sentenced individuals, the exact drug weight is missing for 3,609 (19.4%). Because a significant proportion of the cases are missing drug weight, in Commission analyses and reports, the BOL is often used as a “proxy” for the sentenced individual’s drug weight, and sentenced individuals with the same BOL or range of weights are grouped together.

22 [MWEIGHT] may have a valid value if multiple drugs are involved, and at least one of the drugs has a valid value.

23 Prior to fiscal year 2023, the weight range variables [DAFROM1-DAFROMX] and [DATO1-DATOX] were not used in the determination of the primary drug type. Starting in fiscal year 2023, the gram weight variables [WGT1-WGTX] and the converted drug weight variables [MWGT1-MWGTX and MWEIGHT] all include the converted drug range “from” amount [DAFROM1-DAFROMX] if it was provided. Therefore, the weight is “filled-in” much more frequently for these variables than in previous years.

24 See CASSANDRA SYCKES, U.S. SENT’G COMM’N, RESEARCH NOTES: THE SIGNIFICANCE OF [SOURCES]: RESOLVING GUIDELINE APPLICATION DISCREPANCIES IN FEDERAL SENTENCING DOCUMENTS (2020).

25 Cases which are designated as “Court Findings” for [SOURCES] generally do not have any data mis-matching issues (i.e., when the BOL/SOCs/Chapter Three adjustments are added together, they match the FOL and when the criminal history points are added together, they match the recorded CHC). However, if there is a guideline application error in the PSR, (e.g., if the guideline computation omits a floor or ceiling for an SOC, includes an invalid value for a BOL/SOC/Chapter Three adjustment that does not exist in the *Guidelines Manual*, or assigns a CHC that does not match up with the total criminal history points) and the court accepts the guideline calculation at the time of

sentencing, then the case will still be coded as having a [SOURCES] value of “Court Findings” since the court accepted the error and the Commission staff understand that this error is the only reason for the mismatch between the individual guideline application components and the FOL/CHC. Therefore, screening out cases that are not designated as “Court Findings” will remove most but not all data inconsistencies.

26 21 U.S.C. §§ 841(b), 960(b). For more information about specific drug mandatory minimum penalties, see CHRISTINE KITCHENS, U.S. SENT’G COMM’N, RESEARCH NOTES: STATUTE AND MANDATORY MINIMUM PENALTY VARIABLES (2020).

27 While some statutes have mandatory minimum penalties that are always consecutive to one another, the drug mandatory minimum penalties are not specified as consecutive. Therefore, if a sentenced individual has one count of 21 U.S.C. § 841(b)(1)(A) in which the mandatory minimum penalty is 120 months and a second count of conviction under 21 U.S.C. § 841(b)(1)(B) in which the mandatory minimum penalty is 60 months, then the total value for [DRUGMIN] would be 120 (months). For more detailed information about the Drug Trafficking guidelines, see *supra* note 9.

28 For example, if a sentenced individual had a 12-month mandatory minimum for [METHMIN] and was also convicted under 21 U.S.C. § 841(b)(1)(B) with a 60-month mandatory minimum penalty, then the variable [DRUGMIN] would have a value of 72.

29 Note that [ISMETHMIN] is “yes” regardless of whether any consecutive penalties were documented in the case.

30 Pub. L. No. 115–391, § 401, 132 Stat. 5194, 5220 (2018); see also Sentencing Practice Talk, *The First Step Act of 2018*, U.S. SENT’G COMM’N (Feb. 2019), <https://www.ussc.gov/sentencing-practice-talk-episode-19>; U.S. SENT’G COMM’N, ESP INSIDER EXPRESS SPECIAL EDITION: FIRST STEP ACT (2019).

31 See 2023 SOURCEBOOK, *supra* note 4, at tbl.D-11, fig.D-2.

32 For additional information and data about the application of mandatory minimum penalties, see U.S. SENT’G COMM’N, AN OVERVIEW OF MANDATORY MINIMUM PENALTIES IN THE FEDERAL CRIMINAL JUSTICE SYSTEM (2017).

33 USSG §5K1.1. Application of §5K1.1 does not always mean that the government applied for *statutory* relief under 18 U.S.C. § 3553(e), the government may only be seeking a reduction in the sentence, but not below the mandatory minimum. However, generally the §5K1.1 and 18 U.S.C. § 3553(e) provisions are linked. The Commission generally uses the variable [SENTRNGE] (or [BOOKERCD]/[DEPART] in earlier data years) to report the number of sentenced individuals who have provided substantial assistance to authorities. This variable utilizes several fields on the J&C and SOR to determine if the sentence is within the final guideline range or outside of the range (and if so why). In addition, the current J&C/SOR form AO245B has checkboxes for the court to document whether the sentence is at or below (and if so why) the mandatory minimum penalties. See ADMIN. OFF. OF THE U.S. CTS, JUDGMENT IN A CRIMINAL CASE 245B FORM (2019). The Commission collects the information from these checkboxes in the fields [MAND1] through [MAND6]—note that the court may check multiple boxes, so researchers need to look through all the [MAND1] through [MAND6] fields. The Commission also collects checkbox information from the SOR on whether the origin of the outside of the range sentence was from the plea or a motion not in a plea, as well as the reasons for the departure or variance. All this information is combined to create [SENTRNGE] so it is considered a more complete reporting of substantial assistance departures than simply using the [MAND1] through [MAND6] variables, but it may include some sentenced individuals for whom the documents received by the Commission do not indicate that the government made a motion for the sentenced individual to be sentenced below the mandatory minimum under 18 U.S.C. § 3553(e) along with the §5K1.1 motion.

34 Congress enacted the safety valve provision at 18 U.S.C. § 3553(f) and the Commission used the statutory qualifications when creating §5C1.2. See USSG App. C, amend. 509 (effective Sept. 23, 1994). The Commission expanded the benefit of the provision in the 1995 *Guidelines Manual* to allow individuals sentenced under §2D1.1

(Drug Trafficking) who met the qualifications in §5C1.2 to receive a two-level reduction in their offense level. See USSG App. C, amend. 515 (effective Nov. 1, 1995). Over the years, the Commission expanded the safety valve provision in §2D1.1 to sentenced individuals with lower base offense levels as well as to sentenced individuals sentenced under §2D1.11 (Trafficking or Possessing Listed Chemicals). In December 2018, the First Step Act expanded the safety valve provision so that more individuals would be eligible to be sentenced below the mandatory minimum drug penalties. JULIE ZIBULSKY & CHRISTINE KITCHENS, U.S. SENT'G COMM'N, THE FIRST STEP ACT OF 2018: ONE YEAR OF IMPLEMENTATION 17–18 (2020).

35 THE FIRST STEP ACT OF 2018: ONE YEAR OF IMPLEMENTATION, *supra* note 34, at 18.

36 The variable [SENTRNGE] is available on the Commission's individual datafiles starting in FY2014. The variable [BOOKERCD] was used for reporting purposes prior to FY2018 and is available from the date of the Supreme Court *Booker* decision (January 12, 2005) through FY2017 on the Commission's individual datafiles. The variables [DEPART_A] and [DEPART] were used for reporting purposes prior to the *Booker* decision.

37 The variable [SAFETY] is an indicator variable which is "Yes" if either the sentenced individual received relief under 18 U.S.C. § 3553(f) or received the two-level reduction under §§2D1.1/2D1.11. The variable [SAFE] specifically tells the researcher if the sentenced individual received the two-levels ([SAFE]=1) or if the sentenced individual received the benefit of 18 U.S.C. § 3553(f) without the two-level guideline reduction ([SAFE]=2). Note that researchers should limit their case pool to sentenced individuals in which the Commission received complete guideline application information ([SOURCES]=1) for any analysis which centers on sentenced individuals receiving the two-level guideline reduction in order to be certain that all of the sentenced individuals in the case pool actually got that benefit at sentencing (by limiting the case pool to [SOURCES]=1, researchers only keep sentenced individuals whose FOL and CHC matched between the PSR and SOR or in which the SOR fully explained all differences such that the guideline application (such as SOC's) could be changed to match the court's findings at sentencing). For more information about the variable [SOURCES], see *supra* note 24. Also note that when the safety valve has been applied the final sentencing guideline range [GLMIN] and [GLMAX] will not have the statutory trumps incorporated into them because the mandatory minimum does not apply at sentencing. An example: if a sentenced individual has a guideline range of 51 to 63 months (*i.e.*, [XMINSOR]=51 and [XMAXSOR]=63), and a 60-month drug mandatory minimum (*i.e.*, [DRUGMIN]=60), then normally [GLMIN] would be 60 and [GLMAX] would be 63. However, if the safety valve provision is applied, then the final sentencing range would be reported out to be the same as the "untrumped" range (*i.e.*, [GLMIN]=51 and [GLMAX]=63).

38 USSG §2D1.1.

39 See U.S. SENT'G COMM'N, USE OF GUIDELINES AND SPECIFIC OFFENSE CHARACTERISTICS SENTENCED INDIVIDUAL BASED: FISCAL YEAR 2023, at 56 (2024).

40 See §2D1.1(a)(5) and §3B1.2 for more information about the specific criteria required for the mitigating role cap to be granted as well as the benefits. USSG §§2D1.1(a)(5), 3B1.2.

41 As an example, if the sentenced individual was held accountable for 15KG of heroin using the 2024 *Guidelines Manual*, then the BOL determined under the drug quantity table in §2D1.1 would be 34. However, if the sentenced individual qualified for the Mitigating Role Cap, the BOL would be 31 after the application of the Mitigating Role Cap at §2D1.1(a)(5)(B)(ii). The Commission's datafile would record the primary sentencing guideline [GDLNHI] as "2D1.1", the BOL as "31" under [BASEHI], the line number [BASLNHI] as "5", and the label [BASELHI] as "B2". Because the sentenced individual received a decrease of three levels for the Mitigating Role Cap, the pre-Mitigating Role BOL Cap is "34", which is the value that corresponds to the sentenced individual's drug weight in the drug quantity table.

42 18 U.S.C. § 924(c).

43 *Id.* § 924(c)(1)(D).

44 In addition to [GUNMIN1] and [IS924C], there is also [ONLY924C] which identifies sentenced individuals who only have counts of conviction with 18 U.S.C. § 924(c) as the substantive statutes of conviction—note the sentenced individual may have other conspiracy or non-substantive statutes as well. Note that sentenced individuals who have count(s) of conviction for other offenses in addition to 18 U.S.C. § 924(c) will have the mandatory minimum penalty recorded in [GUNMIN1] added to their guideline range to determine the final sentencing range [GLMIN and GLMAX] unless the Career Offender sentencing table provision (see [CO924TAB] for more info) is applied.

45 See USSG §§2D1.1(b)(1), 2D1.11(b)(1).

46 Note that [WEAPSOC] is also used for analysis of weapon enhancements in other guidelines in addition to §2D1.1. Researchers will need to limit their analysis to whichever specific guidelines are of interest. If one case involves more than one guideline (*e.g.*, §2D1.1 Drug Trafficking and §2B3.1 Robbery) and the sentenced individual received a weapon enhancement for the non-drug trafficking guideline, then the variable [WEAPSOC] will be "yes". Researchers may want to either use the variable [WEAPSCH1] in conjunction with limiting their analysis to §2D1.1 (Drug Trafficking) as the primary sentencing guideline to find cases where the weapon enhancement was in the [GDLNHI].

47 USSG §2K2.4, comments. (n.1–7).

48 USSG §2D1.11.

49 If multiple "other" chemicals are involved, the name of each chemical is entered into the text field (*i.e.*, one text field may contain the names of several "other chemical types").

50 The unit of measurement is recorded in whatever measurement is expressed in the PSR. Examples of the types of units recorded include grams, kilograms, ounces, pounds, liters, etc.

51 See USSG §2D1.11(d),(e)(Notes A–C).

About the Office of Research and Data

ORD provides statistical and other social science research and analyses on specific sentencing issues and federal crime.

The office receives documents from the federal courts concerning the sentences imposed on individuals, analyzes and enters information from those documents into the Commission's comprehensive computer database, and creates annual datafiles of sentencing information.



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