

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

THE CITY OF HUNTINGTON,

Plaintiff,

v.

Civil Action No. 3:17-01362

AMERISOURCEBERGEN DRUG  
CORPORATION, et al.,

Defendants.

v.

Civil Action No. 3:17-01665

CABELL COUNTY COMMISSION,

Plaintiff,

v.

AMERISOURCEBERGEN DRUG  
CORPORATION, et al.,

Defendants.

MEMORANDUM OPINION

During the testimony of Dr. Craig McCann, plaintiffs introduced charts that Dr. McCann created to summarize certain datasets. Plaintiffs contend that these charts are admissible under Federal Rule of Evidence 1006. Defendants contend that they are not. According to defendants, the summaries are merely demonstrative exhibits, not substantive evidence. On May 12, 2021, the court conditionally admitted the summaries under Rule 1006 and ordered briefing on the issue. On May 18, 2021, the

court ruled that the summaries are admissible under Rule 1006, thereby overruling defendants' objection and admitting the charts.<sup>1</sup> The court now sets forth its reasoning.

## I. Background

### a. Dr. McCann

McCann received a Ph.D. in economics from the University of California at Los Angeles in 1989. Throughout the 1990s, he taught graduate-level economics and finance courses at the University of South Carolina (1987 to 1992), Virginia Tech (1995 to 1997), Georgetown University (1996), and the University of Maryland (1995 to 1998). In addition, he served as an academic fellow for the U.S. Securities and Exchange Commission.

In re Nat'l Prescription Opiate Litig., 2019 WL 3934490, at \*7 (N.D. Ohio Aug. 20, 2019) (citations omitted).

McCann explained that during the time of his doctoral studies, "some of [his] peers were what we would call theoreticians and others empiricists." (May 10, 2021 Trial Tr. 10, ECF No. 1333.) McCann describes himself as an empiricist. Of his approximately 35 peer-reviewed papers, the "vast majority

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<sup>1</sup> The objection that the charts are improper under Rule 1006 is overruled. This is the only issue that the parties were asked to brief. This opinion does not deal with separate objections, such as the objection that certain charts include pharmacies outside the geographic scope at issue (Cabell County and the City of Huntington). If the court later determines that certain summaries (or certain portions thereof) are irrelevant, the court will excise them from its consideration. But the court does reject the argument that by including pharmacies outside Cabell County and the City of Huntington, the summaries are skewed or otherwise inadmissible under Rule 1006.

of them” are “empirical” and involve “gathering data from different sources, reporting summary statistics, generating tables, figures, charts.” (Id. at 13-14.) McCann indicated that those empirical papers tend to go “beyond the simple data summary of the type [presented] here with the opioid data” by including “some statistical analysis or some valuation.” (Id.)

McCann has testified in the context of state or federal litigation approximately 150 times, and in the context of administrative proceedings or arbitrations approximately 450 times. On May 10, 2021, this court found McCann to be “an expert on data processing, validating, supplementing, reconciling and summarizing large datasets as they relate to ARCOS and the related governmental datasets that [plaintiffs] used to supplement them.” (Id. at 19-20.)<sup>2</sup>

**b. ARCOS Data**

The court has previously described the Drug Enforcement Administration’s Automation of Reports and Consolidated Orders System (“ARCOS”) database. (See ECF No. 1236, at 1-4.) Generally speaking, ARCOS is a system that receives reports regarding the flow of controlled substances, including opioids, among different members of the supply chain. ARCOS can be

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<sup>2</sup> Obviously, McCann’s expertise in processing large datasets is not limited to ARCOS data and includes, for instance, the transactional data that defendants produced in discovery.

thought of as a "portal" through which the DEA gathers data regarding opioid shipments. (See ECF No. 1333, at 21.) The repository of data that the portal collects can be referred to as the ARCOS data.

The ARCOS data here is a subset of the entirety of the ARCOS data in existence. It covers only 9 years (2006-2014) and only 14 drug codes. The DEA produced this raw data in "tranches," with the production of the last tranche taking place in approximately August 2018. (Id. at 21.) The raw ARCOS data amounts to "roughly 500 million records of shipments," which, if printed, would fill up approximately 20,000 banker's boxes. (Id. at 28.)

There is no dispute that the ARCOS data is admissible.<sup>3</sup> There is also no dispute that it is unworkable in the manner in which the DEA produced it. The only way to comprehend this admissible evidence in a meaningful way is to summarize it.<sup>4</sup>

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<sup>3</sup> This is so at least as to the ARCOS data that Dr. McCann summarized for this case. Plaintiffs' attempt to enter (in the form of a flash drive) the entirety of the ARCOS data that the DEA produced was met with an objection on grounds that the data was unworkable, cumulative, and beyond the geographic scope of this case. (Id. at 39-43.) In a later colloquy, defendants stated that they had no objection to the admissibility of the subset of the ARCOS data that McCann summarized. (May 11, 2021 Trial Tr. 124-25, ECF No. 1342.) Defendants stated the same as to the transactional data produced in discovery that McCann also summarized. (Id.)

<sup>4</sup> Defendants assure the court that a ruling in their favor on this issue "would not keep ARCOS data entirely out of the case"

### c. Defendants' Transactional Data

ARCOS data is not the only source of information pertaining to the quantity and frequency of opioid shipments from defendants into plaintiffs' jurisdictions. Defendants' internal records of these shipments, which they produced in discovery, is another source. These records go beyond the timeframe of the ARCOS data. AmerisourceBergen produced records for June 2002 to December 2018. (ECF No. 1333, at 81-82.) Cardinal produced records for 1996 to May 2018. (Id. at 85.) McKesson produced records from 2004 to 2018. (Id. at 88.) The McCann charts summarize these records (the "transactional data") to the extent that the charts at least partially cover time outside the 2006 to 2014 ARCOS window or, rarely, when there are slight gaps in the ARCOS data.<sup>5</sup>

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because defendants have stipulated to its authenticity and plaintiffs can use it "to examine any witness with whom [plaintiffs] are able to lay a proper foundation." (See ECF No. 1347, at 3 n.1.) This assurance is cold comfort. The opportunity to piece together fragmented witness testimony (assuming the admissibility of that testimony) concerning this evidence is a far cry from being able to consider the evidence itself (in summary form). See 5 Christopher B. Mueller & Laird C. Kirkpatrick, Federal Evidence § 10:34 (4th ed.) ("Details might emerge, but not the whole shape of things—the trees may be clear enough, but not the forest.").

<sup>5</sup> As the most notable example of such a gap, the ARCOS data does not include the relevant transactions for Cardinal for a single month (March 2008), but the data that Cardinal produced in discovery (the transactional data) does include them. (Id. at 50.) Such gaps in the ARCOS data account for significantly less than 1% of the data, among the 3 defendants. (See id. at 49.)

**d. McCann's Summaries**

McCann produced summaries in the form of charts.<sup>6</sup> The charts tabulate or illustrate a morass of data to make it comprehensible. These charts do not purport to summarize all of the ARCOS data that the DEA produced. Instead, for this case, McCann narrowed his subject of summary to only the ARCOS data that bears on this case. He did not include distributions, for example, bound for export or research, or to the state of Washington (except to the extent such shipments are included in national figures and averages), or to hospitals.

Just as McCann does not attempt to summarize all of the ARCOS data, so too, he does not limit his summaries to the ARCOS data alone. Specifically, many of his summaries capture both the ARCOS data and defendants' transactional data produced in discovery. It is therefore both too narrow and too broad to think of all of McCann's charts as strictly ARCOS data charts. Some are summaries of a subset of the ARCOS data, while others are summaries of a subset of the ARCOS data, plus the transactional data. Some charts summarize shipments to individual pharmacies; others, shipments to multiple pharmacies; and still others, shipments into geographical areas. Some

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<sup>6</sup> The court will use "charts" as shorthand for charts, graphs, and tables.

charts focus on distributions by defendants (or a single defendant), while others include all distributors. Many compare distributions into different geographical areas.

## **II. Discussion**

Defendants argue that Rule 1006 does not embrace the McCann charts for two main reasons. First, they argue that what McCann created are not proper Rule 1006 charts because (1) he used information not available on the face of the raw ARCOS data (such as U.S. Census Bureau data and information from the Centers for Disease Control and Prevention) to calculate and convey information such as per capita figures and morphine milligram equivalent ("MME") figures; and (2) he narrowed his subject of summary and made certain corrections to the data. Second, they argue that the charts are skewed. The court is unpersuaded by both arguments.

Rule 1006 provides:

The proponent may use a summary, chart, or calculation to prove the content of voluminous writings, recordings, or photographs that cannot be conveniently examined in court. The proponent must make the originals or duplicates available for examination or copying, or both, by other parties at a reasonable time and place. And the court may order the proponent to produce them in court.

Fed. R. Evid. 1006.

Federal courts have wide discretion in determining whether to admit evidence under Rule 1006. United States v. Blackwell,

436 F. App'x 192, 198 (4th Cir. 2011); United States v. Milkiewicz, 470 F.3d 390, 398 (1st Cir. 2006) (appellate review "highly deferential"); 31 Charles Alan Wright & Victor James Gold, Federal Practice and Procedure § 8044 (2021) ("[T]he convenience standard of Rule 1006 gives trial courts significant discretion."). This discretion, however, is not unbounded. First, the proffered summaries must meet certain basic requirements. They must be "an accurate compilation." United States v. Janati, 374 F.3d 263, 272 (4th Cir. 2004). They must be based on records that are admissible and that have been provided to the opposing party. Id. at 272-73. And sometimes they must be produced in court. Id. at 273. Thus, there are dual safeguards to ensure against bad summaries: (1) a threshold accuracy requirement and (2) a procedure to ensure the opposing party an opportunity to bring inaccuracies to light. See id. at 272-73.

Properly understood, the threshold accuracy requirement is a modest one. Charts are admissible despite mistakes. United States v. Hemphill, 514 F.3d 1350, 1359 (D.C. Cir. 2008) ("Even if the calculations are mistaken, the chart is itself admissible, since admissible evidence may be unpersuasive and a defendant has the opportunity to rebut it."). Charts are admissible despite their encompassing less than all the underlying data. United States v. Blackwell, 436 F. App'x 192,

199 (4th Cir. 2011); United States v. Bentley, 825 F.2d 1104, 1108 (7th Cir. 1987) (“[C]harts need not be encyclopedic to be admissible.”); Gill v. Arab Bank 893 F. Supp. 2d 523, 536 (E.D.N.Y. 2012) (Weinstein, J.). And there is an important distinction between an inaccurate chart and a chart that supports only one side of the story. See United States v. Lynch, 735 F. App’x 780, 786 (3d Cir. 2018) (“A Rule 1006 summary chart need not accurately reflect all the facts in the case; it merely must accurately represent the facts that it purports to summarize. ‘So long as they are accurate, however, such summaries may present only one party’s side of the case.’ The fact that G-94 did not include all the related accounts does not undermine its admissibility because it accurately reflected the accounts it did include. It was up to Lynch, on cross-examination, to show the jury that there was more to the story, and he effectively did so.” (citations omitted)).

Besides these basic requirements, Fourth Circuit precedent cabins the wide discretion that trial courts have under Rule 1006, in either direction. On one hand, when proffered summaries meet the basic requirements of Rule 1006, a district court in this circuit abuses its discretion by cutting off both the summary path and “the long way,” especially in complex cases. See Janati, 374 F.3d at 274. On the other hand, a district court abuses its discretion by admitting a proffered

summary under Rule 1006 that amounts to “a skewed selection of some of the [underlying] documents to further the proponent’s theory of the case.” United States v. Oloyede, 933 F.3d 302, 311 (4th Cir. 2019) (emphasis in original). Together, Janati and Oloyede act as guideposts for when it is permissible to exclude a proffered summary and when it is permissible to admit one. This court must navigate between these guideposts by being cognizant of the importance of summary evidence (especially in complex cases) but on guard against skewed summaries.

The Janati opinion was the result of an interlocutory appeal in a “complex healthcare fraud prosecution,” where the government sought from the appeals court “the necessary evidentiary latitude to prove its case.” See 374 F.3d at 266. The relevant question there was “whether the government [could] use Rule 1006 charts in its case-in-chief to present its experts’ conclusions about fraud with respect to some 1300 transactions alleged in furtherance of the conspiracy.” Id. at 270. The defendants there objected to the admission of the charts on the grounds that the charts were “*independent* evidence and not a summary of the *evidence*,” that the government did not really need the charts, and that the summaries would impermissibly contain opinion evidence. Id. at 272 (emphasis in original).

In rejecting these arguments, the appeals court stressed the need for summary evidence in complex cases. Id. at 274-75. In the absence of a definitive ruling by the trial court on the admissibility of any chart, the appeals court found no abuse of discretion. Id. at 273. But the appeals court made clear that if the district court exercised its discretion to exclude the proffered summaries, the district court "must accord the government the right in some manner and to some reasonable extent to prove its case the long way." Id. at 274. Thus, Janati stands for the principle that when presented with admissible voluminous evidence and an acceptable summary of it, a district court that rejects both abuses its discretion (at least to the extent the excluded evidence is necessary for a party to make its case).

Oloyede is the other side of the coin. The appellants there argued that the summaries admitted against them "represented an 'editorialized subsection of [banking] transactions.'" Oloyede, 933 F.3d at 310. The appeals court agreed that the summaries were the product of manipulated bank records:

For example . . . while [the FBI forensic accountant] included *all* cash deposits and *all* ATM deposits to the extent that bank records did not identify whether it was a cash or check deposit, he included wire transfers only to the extent that the bank statement identified the name of the sender and that name was on a list provided to him by the case agent. Similarly,

he included check deposits only to the extent that the check was written by an individual on the list and out-of-state teller transfers only to the extent that a receipt associated with the transfer was included as an attachment in a batch of emails that [the accountant] was provided.

Id. at 310 (emphasis in original). Accordingly, the summaries represented "a skewed selection of some of the documents to further the proponent's theory of the case." Id. at 311. "They did not fully represent the accounts that they were purportedly summarizing." Id. at 310. Thus, the charts masqueraded as one thing (comprehensive summaries of certain bank accounts), but were in fact another (summaries of only some transactions). The purpose of the charts in Oloyede was to help the jury comprehend a suspicious pattern based on selected transactions, not to convey voluminous records to the jury in an intelligible form. Id. at 311. Because the charts had the airs of comprehensiveness, the purpose was a hidden one. See id. The appeals court drew the line at this sort of misleading chart. See id.

This court must first determine whether the McCann charts meet the basic requirements of Rule 1006. The underlying data is undoubtedly voluminous. See United States v. Aubrey, 800 F.3d 1115, 1130 (9th Cir. 2015) ("Multiple bankers' boxes of bank statements constitute the type of materials anticipated by Rule 1006."). The defendants received the underlying data with

reasonable time to review it.<sup>7</sup> No party has requested that plaintiffs produce the underlying data in court. And the underlying data is, all parties agree, admissible. The contention is over whether the charts have the proper inputs and whether they are skewed.

**a. The "Four Corners" Argument**

As to the inputs, defendants say that the summaries run afoul of Rule 1006 by "concededly go[ing] beyond the four corners of the ARCOS database." (ECF No. 1347, at 7.) They say that this is contrary to the rule that Rule 1006 summaries may

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<sup>7</sup> At least one federal appeals court has deemed disclosure of the summaries themselves unnecessary. See Colon-Fontanez v. Municipality of San Juan, 660 F.3d 17, 30 (1st Cir. 2011). And at least one federal appeals court has suggested that fundamental fairness requires such disclosure. See Fid. Nat. Title Ins. v. Intercounty Nat. Title Ins., 412 F.3d 745, 753 (7th Cir. 2005). Commentaries tend to support the latter view. See 31 Charles Alan Wright & Victor James Gold, Federal Practice and Procedure § 8045 (2021) (explaining that providing the summaries to adverse parties is necessary to fulfill purpose of Rule 1006 because, without the summaries, "adverse parties cannot know what to look for in the source material to determine if the summaries are accurate."); 8 Graham, Michael H., Handbook of Fed. Evid. § 1006:1 (9th ed.) (opining that not to require disclosure of summaries "is ludicrous and clearly defeating of the entire purpose of Rule 1006—to permit employment of a summary, chart or calculation only upon providing the opponent the opportunity to effectively explore objecting to its admissibility and/or being placed in a position to effectively meet the evidence being introduced."); Krakauer v. Dish Network L.L.C., No. 1:14-CV-333, 2016 WL 6775859, at \*5 (M.D.N.C. Sept. 19, 2016). There appears to be no question, however, that defendants received the McCann charts with ample time to review them, check their accuracy, and prepare to cross-examine their author.

not "contain information not present in the original."

Universal Furniture Int'l, Inc. v. Collezione Europa, USA, Inc., 599 F. Supp. 2d 648, 656 (M.D.N.C. 2009), aff'd, 618 F.3d 417 (4th Cir. 2010).

The Universal Furniture rule regarding information that is not in the original is easily overstated. Delving this rule to the root, which appears to be Standard Oil Co. v. Moore, 251 F.2d 188, 223 (9th Cir. 1957), is almost to watch it disappear. In Moore, the plaintiff introduced, and the trial court admitted, certain documents in support of Moore's alleged damages. Id. at 222-23. These included Moore's tax returns (as purported summaries of a business ledger) and summaries based upon those tax returns. Id. The Ninth Circuit Court of Appeals held that these documents were inadmissible as summaries because they "contain[ed] computations which [were] not reflections of ledger entries" and were never offered "as summaries of [the plaintiff's] accounting records." Id. at 223. The tax returns were hearsay documents that happened to contain some figures reflecting admissible business records, and the summaries of the tax returns had the same admissibility flaws. See id. at 222-23.

In Universal Furniture itself, the problem was not that the purported summaries referenced outside information to translate figures into different units of measurement or narrow data into

a subset, but rather, that the author of the summaries had included certain "averages" in them without a proper foundation. Universal Furniture, 599 F. Supp. 2d at 656. More bluntly, the averages in the purported summaries were "unexplained and unreliable." Id. at 658.

And in United States v. Drougas, upon which Universal Furniture relies, the trial court only initially rejected the proffered summaries, and even then, only "because they contained argumentative inferences," not because their author had referenced government data or publications to determine a subset or make the underlying data more comprehensible and the charts more informative. See 748 F.2d 8, 25-26 (1st Cir. 1984).

To the extent that the Universal Furniture rule disallows proffered summaries like tax returns, or those containing the products of unexplained and unreliable calculations, or those laden with argumentative inferences, the rule is a sound one. But defendants' broad reading of the rule, which would essentially force authors of Rule 1006 summaries to ignore all information outside the four corners of the underlying materials, goes too far.

What McCann did with information outside the four corners of the underlying materials was permissible. He applied statements in government publications to narrow his subject of summary and to make the data more comprehensible. Defendants

incorrectly characterize the addition of categories for MME and per capita figures as “embellishments.” (See 1347, at 7.) McCann did not so much add to the underlying data with the government sources as use those sources to translate the data into additional categories, for better comprehension. And “[n]othing [was] lost in the translation.” See United States v. Bray, 139 F.3d 1104, 1110 (6th Cir. 1998).

The inclusion of MME figures on the charts poses no admissibility problem. McCann applied information from the CDC to convert the dosage strengths into MME figures. After the conversion, the summary is still of the ARCOS and transactional data. Nothing was added. It is just expressed in different units of measurement. Stated differently, the raw data always expressed the MME figures, just in different terms. To the extent defendants wish to challenge the CDC’s conversion instructions, or McCann’s application of those instructions, they had the opportunity to do so on cross-examination.<sup>8</sup> The above analysis applies equally to the Food and Drug Administration’s published list of drug labelers. McCann simply used the FDA key to unlock distributor names. The names were always there, just in number form.

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<sup>8</sup> They will also have the opportunity to present evidence in their case in chief that the CDC or McCann is wrong about the MME figures, to the extent such evidence exists.

The data from the Centers for Medicare and Medicaid Services also poses no problem. McCann did not add this information to the data he summarized. Instead, McCann used this information to better identify the buyer pharmacies that would be the subject of his subset. Because there is no general prohibition on summarizing a subset, the use of this data to help formulate a subset was permissible. To the extent defendants believe that the CMS data is wrong or that McCann wrongly applied it, the appropriate remedy is cross-examination or the production of defendants' own charts.

McCann's use of the Census data is a little different, but still poses no problem. To include per capita figures, McCann had to do more than simply apply an abstract formula. He had to apply historical facts: the number of persons within various geographical boundaries during various times. He used U.S. Census data, which provides reliable estimates of these historical facts. The court may take judicial notice of U.S. Census data. See United States v. Cecil, 836 F.2d 1431, 1452 (4th Cir. 1988) ("[C]ourts may take judicial notice of official governmental reports and statistics."). Thus, it does not bog down the summaries with inadmissible material, as the purported summaries did in Moore. Neither does bringing Census data to bear on the summaries result in unexplained, unreliable

calculations or introduce argumentative inferences. So even if McCann added something here, the addition was permissible.

Defendants conclude that the portions of the charts providing MME and per capita figures represent McCann's expert opinion. But "[a] calculation does not constitute a conclusion or opinion." United States v. Honeywell Int'l Inc., 337 F.R.D. 456, 459 (D.D.C. 2020). Moreover, the cases on which defendants rely are unavailing. The first case dealt with expert testimony that a party offered under Rule 1006. United States v. Shulick, 994 F.3d 123, 138 (3d Cir. 2021). The appeals court noted,

Judge Bartle then specifically asked defense counsel whether they intended to offer Hamilton as an expert. Defense counsel responded that they would not make any further disclosure and that Hamilton would be offered solely as a summary witness.

But when Hamilton was called to the stand at the opening of the defense case, he attempted to offer expert testimony. Specifically, Hamilton, a CPA who acknowledged that he had previously served as an expert "hundreds of times," was asked why it was appropriate to allocate certain shared costs across Shulick's business ventures to the budget for Southwest—a post-hoc analysis, involving the application of Hamilton's own formulas and judgment to facts. The District Court ultimately excluded this testimony, accepting the Government's argument that it was undisclosed "expert opinion based on his years of accounting experience, based on his forensic background, and based on information that is not available from the records."

Id. at 138-39 (emphasis added) (record citations omitted).

The second case involved an expert who collected random samples of phone calls from a collection of hundreds of millions

of phone call records. United States v. Dish Network LLC, 75 F. Supp. 3d 916, 927, 933, 939 (C.D. Ill. 2014). Doing so “required him to use his expertise in statistical analysis and was not a mere compilation of data.” Id. at 933. He also “employed his expertise in analyzing large data sets” “to calculate a valid Established Business Relationship.” Id. The court determined that the “random samples” were “not a mere compilation of data.” Id. The plaintiffs there argued that the proffered expert’s “testimony and reports” were admissible as summaries as an alternative to showing the expert was qualified under Federal Rule of Evidence 702. See id. at 932. The expert also stated legal conclusions. Id. at 933, n.5. The court determined that some Rule 1006 did not cover “much of his work.” See id. at 933.

Dish Network should be understood by reference to its specific facts, not as a broad prohibition on charts that require any expertise to create. It was not just that expertise was needed to process a large amount of data; rather, the testimony and reports in Dish Network had inputs themselves that could not have been determined without expertise. See id. at 922-23. The distinction is important because if the use of any expertise in creating a chart renders the chart inadmissible, then databases that by their sheer size require some level of expertise to process into charts would never be admissible,

rendering Rule 1006 self-defeating. Ironically, under defendants' interpretation of Rule 1006, when the rule is needed most (when the underlying evidence is most voluminous), it would not apply. Such a reading of the rule does not comport with the purpose of Rule 1006 or with persuasive authority. See Honeywell, 337 F.R.D. at 459; United States v. Bentley, 825 F.2d 1104, 1108 (7th Cir. 1987) (charts using "statistically valid" sampling of trading data admissible to show company's "net position in silver and copper futures" admissible); Sec. & Exch. Comm'n v. Lek Sec. Corp., No. 17CV1789 (DLC), 2019 WL 3034888, at \*3 (S.D.N.Y. July 11, 2019) (describing as "classic summary evidence," testimony, tables, and charts conveying calculations involving analysis of market data); United States v. Pomrenke, 198 F. Supp. 3d 648, 706-08 (W.D. Va. 2016); Sec. Inv. Prot. Corp. v. Bernard L. Madoff Inv. Sec. LLC, 610 B.R. 197, 225 (Bankr. S.D.N.Y. 2019).

**b. Arguments Regarding Narrowing and Corrections**

Defendants also contend that the McCann charts are out of bounds because they do not cover all of the ARCOS data. They say McCann erred by narrowing his subset to categories he deemed relevant and by excluding what he deemed errant entries. This contention involves two quite different alleged deficiencies. The relevance argument falls flat. What defendants make much of as "relevancy determinations" are no more than McCann's

narrowing of his subject of summarization.<sup>9</sup> Subject to the limitations of Oleyede, there is generally no problem with summarizing a subset of a dataset. Making subsets off limits under Rule 1006 would seriously undermine the purpose of the rule, and the text does not require reading the rule to be self-defeating.

Defendants' specific suggestion that McCann narrowed his subset to exclude (the relatively infinitesimal)<sup>10</sup> R (return) transactions because he wanted to "maximiz[e] Defendants' overall shipment volume" is baseless. (See ECF No. 1347, at 4.) First, because they are so small, McCann's exclusion of the R transactions does very little (and in most charts, nothing) to accomplish his purported goal. Second, in their characterization of McCann's motives, defendants ignore the reasoned explanation that he gave for not including the R transactions in his subset: The problems with this category

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<sup>9</sup> "But what we did was, we took that data, narrowed it down to shipments from manufacturers, to distributors, to dispensers, and then checked internally that data to find some potential data errors." (ECF No. 1333, at 18.)

<sup>10</sup> As McCann testified concerning the R transactions, "[T]he magnitude of them is really quite small. You've identified one month where there are perhaps 20 or 25% of that month's shipments but, overall, there were a truly, truly tiny percent of the overall shipments." (May 11, 2021 Trial Tr. 115, ECF No. 1337.) And further: "[T]hese R Transactions account for approximately six tenths of 1% of the shipment data and of the -- of the shipments from wholesalers and distributors to dispensers." (ECF No. 1342, at 114.)

outweigh its usefulness. Because it is often unclear which distributor originally shipped the (later) returned pills, and because the changes in almost all the charts would be nonexistent or imperceptible, whatever completeness might be achieved would be overshadowed by the uncertainty surrounding the R transactions. (ECF No. 1342, at 114-15.) Moreover, to the extent defendants feel that their cross examination was insufficient to establish the purported significance of the R transactions, they are presumably free to present their own competing charts with the R transactions in their case in chief.

The corrections to the ARCOS data are a separate inquiry. Some exclusions that McCann made are more in the nature of corrections. Dr. McCann excluded duplicate transactions, erroneous transactions, transactions with obvious errors in quantity, and transactions reported as lost in transit. Additionally, McCann corrected miscalculated weight figures.

In some cases, corrections to underlying data may render summaries inaccurate and inadmissible. But this is not such a case. McCann was completely transparent about the corrections he made, and the corrections were appropriate. Perhaps most significantly, however, the corrections were microscopic, and no magnification of them renders the charts inadmissible.

McCann testified as follows regarding these corrections:

I'm going to talk a little bit about these --

these corrections or adjustments that we made. They don't really deserve the weight of the testimony I give them because they're on the order of one hundredth of 1% or two hundredths of 1%, but for completeness, I describe the corrections that we made.

(ECF No. 1333, at 22.)

And the corrections account for something like less than a tenth of 1%, maybe less than five one hundredths of a percent. So, . . . what I summarize here is ARCOS data with very minimal, very minimal corrections, trivial.

(ECF No. 1342, at 112.)

Defendants' argument appears to be that any correction to summarized material, no matter how miniscule, infects the material such that no summary based upon it is admissible. Rule 1006 is not so impractical.

**c. The "Skewed" Argument**

Finally, defendants argue that the charts are inadmissible because they are "skewed" under Oloyede. They identify two problems. First, they say that the charts impermissibly feature "a cherry-picked set of non-representative pharmacies that have no geographical nexus to the City of Huntington or Cabell County" in an attempt to show "bad behavior." (ECF No. 1347, at 9, (quoting ECF No. 1342, at 55-56).) Second, defendants renew their contention regarding the exclusion of R transactions. (See ECF No. 1347, at 10 ("Dr. McCann excluded all transactions other than sales to customers.")) Defendants fail to show that the charts are skewed.

In making the first argument, defendants conflate the selectivity of the individual charts with selectivity of the underlying data used in formulating the charts. Had McCann relied on only the selected pharmacies in formulating average shipment numbers, for example, the summaries could be skewed. It could also be a problem if McCann had held out the pharmacies as representative of other pharmacies in general. But he did not. Each chart is what it purports to be. And no chart presents the product of manipulated data, as in Oloyede. There is no requirement that plaintiffs seek to admit summaries of only "representative" pharmacies. So long as the allegedly high-volume pharmacies are not the product of manipulated data, they are admissible.

The "matrix" of the various pharmacies appears to be the only chart that comes close to being susceptible to the charge of being skewed. This chart lists shipments to pharmacies both inside and outside Cabell County and the City of Huntington. McCann's understanding is that the selection of these pharmacies were "not intended to be selected randomly" but instead were meant to show excessive shipments to pharmacies. (See ECF No. 55-56.) In other words, McCann understood that plaintiffs wanted him to include these pharmacies on the matrix because they were examples of alleged "bad behavior." (See id.)

The problem with defendants' argument is that the matrix does not purport to be random or representative. It is not misleading, as the chart in Oloyede was. Although the pharmacies were apparently selected to show examples of excessive shipments, the figures for those pharmacies are not skewed. That other pharmacies may have received fewer opioids means that other charts may help complete the overall picture, but it does not mean that these charts are skewed. Again, defendants presumably can present those other charts that they think are necessary to round out the picture. But there is no problem with plaintiffs' use of charts to produce evidence regarding certain pharmacies so long as those charts are not masquerading as something they are not.

The argument regarding the exclusion of the R transactions also fails. As explained above, it was permissible for McCann to focus on a subset of the ARCOS data. The charts do not purport to account for net shipments after returns. Moreover, given the extremely small fraction of the ARCOS data for which R transactions account, and given McCann's reasonable explanation for why he excluded them, the exclusion of the R transactions is far different than the exclusion of select banking transactions in Oloyede.

**III. Conclusion**

For the reasons expressed above, the court **OVERRULED** the objection that the charts are improper under Rule 1006 and admitted the charts into evidence under Rule 1006.

The Clerk is directed to send a copy of this Order to those counsel of record who have registered to receive an electronic NEF.

**IT IS SO ORDERED** this 9th day of July, 2021.

ENTER:

A handwritten signature in black ink, reading "David A. Faber", is written over a horizontal line.

David A. Faber

Senior United States District Judge