

Medicare CY 2022 Outpatient Prospective Payment System (OPPS) Final Rule Claims Accounting

Calculating OPPTS payment rates consists of calculating relative resource costs for OPPTS services and calculating budget neutrality adjustments, which are applied to estimates of resource cost and the conversion factor to create a budget neutral prospective payment system. The purpose of the following discussion is to provide a detailed overview of CMS manipulation of the CY 2019 claims data to produce the final prospective CY 2022 OPPTS payment rates. This discussion is divided into two parts: the traditional accounting of claims behind the cost calculations and an accounting of claims behind the budget neutrality, outlier, and impact calculations.

PART 1 - COST CALCULATIONS

CMS used information from approximately 96 million single procedure (natural single), generated single procedure (pseudo single), and generated single “session” composite claim records to set the Ambulatory Payment Classification (APC) rates to be paid under Medicare OPPTS for CY 2022.¹

Included is a narrative description of the accounting of claims used in the setting of final payment rates for Medicare’s 2022 Outpatient Prospective Payment System (OPPTS). For the CY 2022 OPPTS, we continue to develop relative payment weights using APC geometric mean costs.

We note that we generally use claims and cost report data that includes information available prior to the PHE for ratesetting purposes, as discussed in section X.E. of the CY 2022 OPPTS/ASC final rule with comment period. For purposes of this claims accounting narrative, the discussion will be in the context of our final CY 2022 ratesetting process. We note that we made available on the CMS Web Site supporting data files for both the CY 2022 OPPTS proposal to use data prior to the PHE and the alternative proposal in which we would have used updated data

¹ Final CY 2022 rates are based on 2019 calendar year outpatient claims data, specifically final action claims processed through the common working file as of June 30, 2020.

based on the standard process. For the CY 2022 OPPTS/ASC final rule, we are making available cost statistics files associated with the CY 2020 claims data that we typically use for ratesetting.

Geometric mean costs were calculated from claims for services paid under the Medicare OPPTS and cost report data for the hospitals whose claims were used. The geometric mean costs were converted to payment weights by dividing the geometric mean for each APC (a group of HCPCS codes) by the geometric mean cost for APC 5012, the final outpatient clinic visit APC in CY 2022. As discussed in Part 2 of this narrative, the resulting unscaled weights were scaled for budget neutrality to ensure that the recalibration of APC weights for CY 2022 does not increase total OPPTS spending. The final scaled weights were multiplied by the final CY 2022 OPPTS conversion factor to determine the national unadjusted payment rate for the CY 2022 APCs. Payment rates for drugs and biologicals are an exception, as their payment rates are a percentage of average sales price and are not scaled.

This section of the claims accounting narrative is intended to help the public understand the order in which CMS processed claims to produce the final CY 2022 OPPTS geometric mean costs and the reasons that not all claims could be used.

General Information:

To calculate the APC costs that form the basis of OPPTS payment rates, CMS must isolate the specific resources associated with a single unique payable procedure (which has a HCPCS code) in each APC. Much of the following description, Pre-STAGE 1 through STAGE 3, covers the activity by which CMS:

- 1) Extracts the direct charge (i.e. a charge on a line with a separately paid HCPCS code) and the supporting charge(s) (i.e. a charge on a line with a packaged HCPCS or packaged revenue code) for a single, major payable procedure for one unit of the procedure and;
- 2) Packages the supporting charges with the charges for the single unit of the major procedure to acquire a full charge for the single unit of the major procedure.

In order to calculate the costs for composite APCs, CMS must isolate the specific resources associated with a single “session” of the composite service. Although these single session claims have more than one payable service, the direct charge for these services would be combined with supporting packaged charges to identify a full charge for the composite session.

CMS estimates resource costs from the billed charges by applying a cost-to-charge ratio (CCR) to adjust the charges to cost. CMS uses CCRs in the CMS Hospital Cost Report Information System (HCRIS) file in the calculation of the payment weights (in most cases, CCRs based on cost reports beginning in CY 2018). Wherever possible, department CCRs rather than each hospital’s overall CCR are applied to charges with related revenue codes (e.g. pharmacy CCR applied to charges with a pharmacy revenue code). The order of matching department CCRs to revenue codes is laid out in the OPPTS revenue code-to-cost center crosswalk (<http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/>). In general, CMS carries the following data elements from the claim through the weight setting process: revenue code, date of service, HCPCS code, charges (for all lines with a HCPCS code or if there is no HCPCS code, with an allowed revenue code), and units. Some specific cost modeling calculations may require more data elements.

Definitions of terms used:

“Excluded” means the claims were eliminated from further use.

“Removed to another file” means that we removed the claims from the general process but put the claims on another file to be used in a different process; the claims did not remain in the main run but were not eliminated because the claims were used to model specific costs.

“Copied to another file” means that we copied information off the claims for use in another process but did not eliminate any of the copied information from the standard ratesetting process.

“STAGE” means a set of activities that are done in the same run or a series of related runs; the STAGE numbers follow the stages identified in a spreadsheet that accounts for the claims.

Pre-STAGE 1: Identified gross outpatient claim population used for OPPTS payment and applied to the hospital CCRs.

Selected claims for calendar year 2019 from the national claims history, n=179,767,532 records, with a total claim count of 175,914,597. This is not the population of claims paid under OPPTS, but all outpatient claims processed by fiscal intermediaries.

Excluded claims with condition code 04, 20, 21, 77 (n=437,700). These are claims that providers submitted to Medicare knowing that no payment will be made. For example, providers submit claims with a condition code 21 to elicit an official denial notice from Medicare and document that a service is not covered.

Excluded claims with more than 300 lines (n=2,407).

Excluded claims for services furnished in Maryland, Guam, US Virgin Islands, American Samoa, and the Northern Marianas (n=2,268,242).

Balance = 169,067,020

Divided claims into three groups:

- 1) Claims that were not bill type 12X, 13X (hospital outpatient bill types), 14X (laboratory specimen bill types), or 76X (CMHC bill types). Other outpatient bill types are not paid under OPPTS and, therefore, their claims were not used to set OPPTS payment (n=37,138,587).
- 2) Bill types 12X, 13X, or 14X. 12X and 13X claims are hospital outpatient claims. Claims with bill type 14X are laboratory specimen bill types, of which we use a subset for the limited number of services in these claims that are paid under the OPPTS (n=131,917,499).

3) Bill type 76X (CMHC). These claims are used to set the per diem partial hospitalization rate for CMHCs (n=10,934).

Balance for Bill Types 12X, 13X, and 14X = 131,917,499

Incorporated all new Category I and III CPT codes and new Level II HCPCS codes that were effective as of April 1, 2021, July 1, 2021, October 1, 2021, or will be effective January 1, 2022.

Applied hospital specific and, where possible, departmental specific CCRs to claims, and flagged hospitals with CCRs that will be excluded in STAGE 1 below. We used the CCRs that were available in the CMS HCRIS system.

For the CCR calculation process, we used the same general approach that we used in developing the APC rates for CY 2007 and thereafter, using the revised CCR calculation that excluded the costs of paramedical education programs and weighted the outpatient charges by the volume of outpatient services furnished by the hospital. We refer readers to the CY 2007 OPPTS/ASC final rule with comment period for more information (71 FR 67983 through 67985). We first limited the population of cost reports to only those hospitals that filed outpatient claims in CY 2019 before determining whether the CCRs for such hospitals were valid.

STAGE 1: Excluded claims without a valid CCR and removed claims for procedures with unique packaging and cost calculation processes to separate files.

Began with the set of claims with bill types 12X, 13X, and 14X, without Maryland, Guam, or USVI, and including claims with flags for invalid CCRs set (n=131,917,499).

Excluded claims with CCRs that were flagged as invalid in Pre-STAGE 1 and claims with charge equal to payment lines. These included claims for hospitals without a CCR, for hospitals paid an all-inclusive rate, for critical access hospitals, for hospitals with obviously erroneous

CCRs (greater than 90 or less than .0001), and for hospitals with CCRs that were identified as outliers (3 standard deviations from the geometric mean after removing erroneous CCRs) (n=2,309,150).

We note that in this stage we also implement a trim that examines the claims for lines where the charges are equal to payment. If this situation occurs, the claim is removed from ratesetting. We note that this trim is a claim level trim based on line charge and payment, but it has significant overlap with the line item trim for zero payment described in Stage 2.

Identified claims with condition code 41 and removed to another file (n=49,111). These claims were used to calculate the partial hospitalization service per diem rate for hospital-based partial hospitalization programs. (Component of the limited data set (LDS) available for purchase from CMS).

Excluded claims without a HCPCS code (n=9,331).

Removed to another file claims that contain nothing but flu vaccine and PPV vaccine services (n=555,059).

We assessed each line on the claim to determine whether the charge was reported under a revenue code that we allow, for purposes of OPPTS rate setting, on the OPPTS revenue code-to-cost center crosswalk. If the revenue code is allowed, we applied the most specific available hospital specific CCR to the charge on the line. See the OPPTS revenue code-to-cost center crosswalk for the hierarchy of cost centers for each revenue code; where none of the revenue code specific cost centers applied, we used the hospital specific overall ancillary OPPTS CCR to reduce the charges on the line to costs. If the revenue code under which a charge is reported is not allowed for OPPTS rate setting, that charge is not reduced to cost nor used in calculation of the statistics that determine the OPPTS weight. Typically, the OPPTS does not allow revenue codes for OPPTS rate setting that are not allowed for payment by the Integrated Outpatient Code Editor (IOCE).

Balance = 128,994,848

Copied line items for drugs, radiopharmaceuticals, blood, and brachytherapy sources (the lines stay on the claim but are copied off onto another file) to a separate file (n=433,894,671).

No claims were deleted. The rest of the claims process for these services is detailed at the end of this document.

STAGE 2: Excluded claims with codes not payable under OPPTS, conducted initial split of claims into single and multiple bills, and prepared claims for generating pseudo single claims.

As described in the final rule with comment period, our data development process is designed with the goal of using appropriate cost information in setting the APC relative payment weights. This section discusses how we develop “pseudo” single procedure claims (as defined below), with the intention of using more appropriate data from the available claims. In some cases, the bypass process allows us to use some portion of the submitted claim for cost estimation purposes, while the remaining information on the claim continues to be unusable. Consistent with the goal of using appropriate information in our data development process, we only use claims (or portions of each claim) that are appropriate for ratesetting purposes.

The APC relative weights and payments for CY 2022 in Addenda A and B to this final rule with comment period (which are available via the Internet on the CMS Web site) were calculated using claims from CY 2019 that were processed through June 30, 2020. While prior to CY 2013 we historically based the payments on median hospital costs for services in the APC groups, beginning with the CY 2013 OPPTS, we established the cost-based relative payment weights for the OPPTS using geometric mean costs, as discussed in the CY 2013 OPPTS/ASC final rule with comment period (77 FR 68259 through 68271). For the CY 2022 OPPTS final rule with comment period, we continue to use this same methodology, basing payments on geometric mean costs. Under this methodology, we select claims for services paid under the OPPTS and match these claims to the most recent cost report filed by the individual hospitals represented in our claims data.

We continue to believe that it is generally appropriate to use the most current full calendar year claims data and the most recently submitted cost reports to calculate the relative costs underpinning the APC relative payment weights and payment rates. However, as discussed in section X.E of the CY 2022 OPPTS/ASC final rule with comment period, there are a number of issues with regards to the effect of the PHE on the claims and cost report data, and the degree to which we believe they will be representative of the CY 2022 outpatient experience. Accordingly, we generally using data prior to the PHE in establishing CY 2022 OPPTS/ASC ratesetting.

Use of Single and Multiple Procedure Claims

For CY 2022, in general, we continue to use single procedure claims to set the costs on which the APC relative payment weights are based. We generally use single procedure claims to set the estimated costs for APCs because we believe that the OPPTS relative weights on which payment rates are based should be derived from the costs of furnishing one unit of one procedure and because, in many circumstances, we are unable to ensure that packaged costs can be appropriately allocated across multiple procedures performed on the same date of service.

It is generally desirable to use the data from as many claims as possible to recalibrate the APC relative payment weights, including those claims for multiple procedures. As we have for several years, we continue to use date of service stratification and a list of codes to be bypassed to convert multiple procedure claims to “pseudo” single procedure claims. Through bypassing specified codes that we believe do not have significant packaged costs, we are able to use more data from multiple procedure claims. In many cases, this enables us to create multiple “pseudo” single procedure claims from claims that were submitted as multiple procedure claims spanning multiple dates of service, or claims that contained numerous separately paid procedures reported on the same date on one claim. We refer to these newly created single procedure claims as “pseudo” single procedure claims.

For CY 2022, we are bypassing 167 HCPCS codes that are identified in Addendum N to this final rule with comment period (which is available via the Internet on the CMS Web site). Since the inception of the bypass list, the list of codes to be bypassed to convert multiple procedure claims to “pseudo” single procedure claims, we have calculated the percent of “natural” single

claims that contained packaging for each HCPCS code and the amount of packaging on each “natural” single claim for each code. Each year, we generally retain the codes on the previous year’s bypass list and use the updated year’s data used in the CY 2021 OPPTS/ASC final rule to determine whether it would be appropriate to add additional codes to the previous year’s bypass list. For CY 2022, we continue to bypass all of the HCPCS codes on the CY 2021 OPPTS bypass list, with the exception of HCPCS codes that were deleted by CY 2022 (We refer readers to Addendum N to the CY 2022 OPPTS/ASC final rule for the CY 2022 OPPTS bypass list. Addendum N is available via the Internet on the CMS Web site.)

Because we must make some assumptions about packaging in the multiple procedure claims in order to assess a HCPCS code for addition to the bypass list, we assumed that the representation of packaging on “natural” single procedure claims for any given code is comparable to packaging for that code in the multiple procedure claims. The final criteria for the bypass list are:

- There are 100 or more “natural” single procedure claims for the code. This number of single procedure claims ensures that observed outcomes are sufficiently representative of packaging that might occur in the multiple claims.
- Five percent or fewer of the “natural” single procedure claims for the code have packaged costs on that single procedure claim for the code. This criterion results in limiting the amount of packaging being redistributed to the separately payable procedures remaining on the claim after the bypass code is removed and ensures that the costs associated with the bypass code represent the cost of the bypassed service.
- The geometric mean cost of packaging observed in the “natural” single procedure claims is equal to or less than \$60. This criterion also limits the amount of error in redistributed costs. During the assessment of claims against the bypass criteria, we do not know the dollar value of the packaged cost that should be appropriately attributed to the other procedures on the claim. Therefore, ensuring that redistributed costs associated with a bypass code are small in amount and volume protects the validity of cost estimates for low cost services billed with the bypassed service.

- The code cannot be a code for an unlisted service. Unlisted codes do not describe a specific service and, therefore, their costs would not be appropriate for bypass list purposes. Further, unlisted codes are not used in establishing the percent of claims contributing to the APC, nor are their costs used in the calculation of the APC geometric mean.

As a result of the multiple imaging composite APCs that we established in CY 2009, the program logic for creating “pseudo” single procedure claims from bypassed codes that are also members of multiple imaging composite APCs changed. When creating the set of “pseudo” single procedure claims, claims that contain “overlap bypass codes” (those HCPCS codes that are both on the bypass list and are members of the multiple imaging composite APCs) were identified first. These HCPCS codes were then processed to create multiple imaging composite “single session” claims, that is, claims containing HCPCS codes from only one imaging family, thus suppressing the initial use of these codes as bypass codes. However, these “overlap bypass codes” were retained on the bypass list because, at the end of the “pseudo” single processing logic, we reassessed the claims without suppression of the “overlap bypass codes” under our longstanding “pseudo” single process to determine whether we could convert additional claims to “pseudo” single procedure claims. This process also created multiple imaging composite “single session” claims that could be used for calculating composite APC costs. “Overlap bypass codes” that are members of the final multiple imaging composite APCs are identified by asterisks (*) in Addendum N to the final rule with comment period (which is available via the Internet on the CMS Web site).

Removed lines from claims that had payable status indicators both in the year the claim was billed and in the prospective payment year, which received no payment. This line item based trim, described in section II.A.2. of the CY 2022 OPPTS/ASC final rule with comment period, was implemented to ensure that we are using valid claims that represent the cost of payable services to set payment rates for the prospective year. Having logic that requires both the status indicator on the claim and the prospective status indicator to be payable, preserves charges for services that would not have been paid in the claim year but for which some estimate of cost is needed for the prospective year (n=1,486,992).

For the CY 2022 OPPTS final rule with comment period, we continue to exclude line item data for pass-through drugs and biologicals (status indicator “G” for CY 2019 claims data), brachytherapy sources (status indicator “U” for CY 2019 claims), blood and blood products (status indicator “R” for CY 2019 claims), and non-pass through drugs and biological (status indicator “K” for CY 2019 claims data) that do not receive payment (n=215,427).

We note that the PN modifier is used to identify items and services furnished and billed by nonexcepted off-campus provider-based departments (PBDs) of hospitals. These lines were removed from ratesetting in the CY 2019 OPPTS and we continue to remove those lines in the CY 2022 OPPTS/ASC final rule with comment. However, we include these lines in the CY 2022 OPPTS NFRM public use files and limited data sets to allow for data analysis to be performed on those lines. As discussed earlier, these PN lines with non-zero payment continue to be removed from CY 2022 OPPTS ratesetting (n=3,875,672).

Prior to splitting the claims, we identified which status indicator Q2 codes (T-packaged) would be paid when appearing with an S or V service. If a Q2 code appeared with a separately paid procedure with a status indicator of T on the same claim, we identified the code as packaged. If the Q2 code appeared with a separately paid procedure(s) with a status indicator of S or V and no other Q2 codes were on the same claim, we forced the units to 1 and changed the major-minor designation to major, identifying the Q2 code as separately paid. If more than one Q2 code appeared on a claim with a separately paid procedure(s) with a status indicator of S or V, we would rank the Q2 codes using their final rule 2021 APC designations and associated scaled weight. We would change the major-minor designation of the Q2 code with the highest weight to major status and force the units to 1. We designated the other Q2s on the claim packaged, status indicator of N, and left their status as minor. Codes that are Q4s are designated status indicator A if they are on a hospital ancillary (12X bill type) or outpatient (13X bill type) claim with no OPPTS service assigned to status indicator J1, J2, S, T, V, Q1, Q2, or Q3; otherwise, they are designated status indicator N. Q4 laboratory services billed on reference laboratory (14X bill type) claims are always designated for separate payment with status indicator A.

Previously, Q4 codes on hospital outpatient (13X bill type) claims with paid OPPTS services received status indicator A and separate payment if billed with modifier L1, indicating the Q4 laboratory service was unrelated to the OPPTS services on the claim. However, use of the L1 modifier to identify unrelated lab services was discontinued on January 1, 2017. As a result of the CY 2022 OPPTS modeling, Q4s present on the same hospital outpatient claim as a payable OPPTS service of status indicator J1, J2, S, T, V, Q1, Q2, or Q3 are assigned a packaged status with status indicator N, regardless of the presence of an L1 modifier.

Divided claims into 5 groups using the indicators (major, minor, or bypass) that are assigned to each HCPCS code. Major procedures are defined as procedure codes with status indicator J1, J2, S, T, or V. Minor procedures are defined as procedures that have status indicator F, G, H, K, L, N, R, or U. Files with an asterisk (*) beside their name are a component of the limited data set (LDS) available for purchase from CMS.

1)*Single Major File: Claims with a single unit of one separately payable procedure (SI=S, T, or V, which are called “major” procedures, including codes with status indicator Q3); claims with one unit of a status indicator Q1 (STV-packaged) code and no other code with a status indicator of S, T, or V on the same claim; or claims with only one unit of a status indicator Q2 (T-packaged) code and no other code with a status indicator of S, T, or V on the same claim. The units of all Q2 codes are changed to 1 in these single major claims. All of these single major claims will be used in ratesetting (n=59,857,105).

We also include claims with services assigned to status indicator J1 and J2 in this category. These claims receive special processing under the final CY 2022 comprehensive APC policy discussed in section II.A.2.b. of the CY 2022 OPPTS/ASC final rule with comment period.

2)*Multiple Major File: Claims with more than one separately payable procedure and/or multiple units of “major” procedures, including codes with status indicator Q3; claims with a status indicator Q2 code that has been designated as major and separately paid (no

procedure with a status indicator T on the same claim and no higher weighted Q2 code on the same claim); or claims that contain conditional and independent bilateral codes when the bilateral modifier is attached to the code. The units of all Q2 code are changed to 1 in the multiple major claims. Multiple major claims are examined in STAGE 3 for dates of service and content to see if they can be divided into simulated or “pseudo” single claims (n=23,257,656).

3)*Single Minor File: Claims with a single unit of a single HCPCS with the status indicator of N (packaged item or service), F, G, H, K, L, R, or U (n=5,564,471). We retain this file in case we have to make last minute changes to packaging criteria.

4)*Multiple Minor File: Claims with multiple HCPCS codes, multiple services on the same claim, and/or multiple units of one or more procedure codes with status indicator of F, G, H, K, L, N, R, or U; claims containing status indicator Q1 (STV-packaged) or status indicator Q2 (T-packaged) codes with more than one unit of the code or more than one line of these codes on the same claim and no other separately paid procedures (n=29,112,353).

5) Non-OPPS claims: These claims have no services payable under OPPS on the claim and are excluded (n=11,203,263). These claims have codes paid under other fee schedules such as the DMEPOS fee schedule and physician fee schedule. These claims have all major or minor procedures billed with PN modifiers, no major or minor procedures on them. The only procedure codes billed without PN modifier on these claims have a status indicator other than J1, J2, S, T, V, N, F, G, H, K, L, R, or U.

STAGE 3: Generated additional single claims or “pseudo singles” from multiple claims files

From the 19,525,468 multiple major claims without a J1 service or the J2 comprehensive, we were able to use 13,172,928 of those claims to create 33,516,746 pseudo single claims. Of the pseudo single claims created, 1,024,185 were single “session” imaging composite claims. As

noted above, the multiple major claims already contained the final payment disposition of codes with status indicator Q2 (T-packaged codes) when they appeared with S, T or V services, making these services part of the pseudo single process. In this preliminary rule data set, pseudo single bills were created in several different ways.

We begin by removing all line items for separately payable procedures that are thought to contain limited packaging (bypass codes) from the multiple major claims as pseudo single claims. Because bypass codes are thought to have limited packaging, we also used the line item for the bypass code as a pseudo single by estimating a unit cost and weighting any descriptive statistics.

Because some of the services on the bypass list also are included in the multiple imaging composites, we suppressed these “overlap bypass codes,” in order to retain all pertinent imaging HCPCS codes to identify a single session composite claim. Overlap codes are HCPCS codes that are both on the bypass list and are members of the multiple imaging composite APCs. The specific “overlap bypass codes” are in the Addendum N promulgated with this CY 2022 OPPTS/ASC final rule with comment period.

We then subset claims out by dates of service and reassessed each new claim for its eligibility as a single major claim, or in the case of the multiple imaging composite APCs, a single session claim.

We created one set of pseudo singles by taking dates of service that now had only one separately paid service.

We created another set of pseudo single bills taking line-items within dates of service that contain multiple major procedures with unit=1 and no additional packaging on the date of service.

We created single session claims for estimating the multiple imaging composite APCs by identifying dates of service that contain more than one unit of a code in the same imaging family

and no other separately payable codes. We later classified the dates of service for CT and CTA family and MRI and MRA family into those with and without contrast to create single session claims for the APC cost calculation.

Having identified all pseudo singles and single session claims, we reassessed the claims without suppression of the “overlap bypass codes” under our longstanding “pseudo” single process to determine whether we could convert additional claims to “pseudo” single claims.

For the CY 2022 OPPTS, we continue our CY 2012 OPPTS policy of including an additional step to create pseudo single claims by treating conditionally packaged codes (identified by status indicators Q1 and Q2) that do not meet the criteria for packaging as if they were separately payable major codes. We then apply the pseudo single process to these claims to create single procedure claims from them if they meet the criteria for single procedure claims.

We were not able to use 33,414,085 claims because these claims continued to contain multiple separately payable procedures with significant packaging and could not be split (n=6,353,210) or because the claims contained services with SI=N and no separately payable procedures on the claim (n=27,060,875). We also were not able to use claims with the following characteristics: major procedure with a zero cost (n=6,485), major procedure with charges less than \$1.01 (n=9,225); or packaging flag of 3 (n=20,035), suggesting token charges. We do not believe that these charges, which were token charges as submitted by the hospital, are valid reflections of hospital resources.

We also created additional single bills from the multiple minor file. We separated status indicator Q1 (STV-packaged) and status indicator Q2 (T-packaged) codes by claim, packaged all packaged costs, including other Q1 and Q2 costs, into the code with the highest CY 2021 payment weight based on CY 2021 APC assignment, forced the units to one to match our policy of paying only one unit of a code with SI=Q1 or Q2, and treated these claims as pseudo single claims. We created 2,050,808 pseudo singles from the multiple minor claims. We were not able to use 27,060,875 multiple minor claims because these claims contained minor codes that could

not be elevated to major status when billed alone: largely drugs or packaged HCPCS coded procedures.

We were not able to use any of the 5,564,471 single minor claims because minor claims, by definition, contain only minor codes: drugs or packaged HCPCS coded procedures. Claims with a single Q1 or Q2 code with a single unit would have been classified as a single major in the initial split logic.

Balance = 96,448,844 (the sum of single majors = 59,857,105 and pseudo singles from multiple majors, multiple minors, and the single “session” composite claims = 36,591,739).

STAGE 4: Packaged costs into the payable HCPCS codes

We package the costs 1) on lines with packaged HCPCS codes and allowed revenue codes as shown in the revenue code-to-cost center crosswalk and 2) on lines without HCPCS but with revenue codes in the packaged revenue code table under Table 2 of this document. This included the cost for coded packaged drugs and biologicals with an ASP and cost for other packaged drugs and biologicals, especially estimated costs associated with uncoded pharmacy revenue codes.

We began with 96,448,844 single procedure claim records that still had costs at the line item level. We summed the costs on the claim to complete packaging and we standardized the total cost using 60 percent of each hospital’s IPPS pre-reclassification wage index. Specifically, standardized cost for the single bill or single session bill = sum of estimated line costs for the single bill or single session bill / ((.6 * pre-reclassification wage index) + .4). We use the pre-reclassified wage indices for standardization because we believe that they better reflect the true costs of items and services in the area in which the hospital is located than the post-reclassification wage indices and, therefore, would result in the most accurate unadjusted geometric mean costs.

We left STAGE 4 with 96,448,844 single procedure claim records containing summarized costs for the payable HCPCS and all packaged codes and revenue centers on the claim.

Balance = 96,448,844

STAGE 5: Calculated HCPCS and APC costs

We began with 96,448,844 single procedure claim records with summarized costs.

We excluded 2,738 claim records that had zero costs after summing all costs on the claim in STAGE 4.

We excluded 0 records because we lacked an appropriate wage index.

We excluded 649,350 claim records that were outside +/- 3 standard deviations from the geometric mean cost for each HCPCS code.

We excluded 18 claim records that contained more than 300 units of the code on the claim.

Balance = 92,269,834

We used the balance of 92,269,834 single procedure claims records to calculate HCPCS code geometric mean costs for the “2 times” examination and APC payment weight development. Section 1833(t)(2) of the Act provides that, subject to certain exceptions, the items and services within an APC group cannot be considered comparable with respect to the use of resources if the highest median (or mean cost, if elected by the Secretary) for an item or service in the group is more than 2 times greater than the lowest median cost for an item or service within the same group (referred to as the “2 times rule”).

We added additional geometric mean costs calculated outside this process. We added a final geometric mean per diem cost for APC 5853 (Partial Hospitalization (3 or more services per day))

for CMHCs), calculated from the bill type 76x claims from Pre-STAGE 1. We also added a geometric mean per diem cost for APC 5863 (Partial Hospitalization (3 or more services per day) for hospital-based PHPs), calculated from the bill type 12X or 13X claims with condition code 41 written off in STAGE 1.

We added blood geometric mean costs that were calculated with the use of a simulated departmental CCR for blood for hospitals that do not have cost centers for blood. We added APC geometric mean costs for composite APCs, as well as other customized or “offline” geometric mean costs discussed in the final rule with comment period, such as those discussed in section II.A.2.c. of the CY 2022 OPPTS/ASC final rule with comment period. The unique assumptions behind each composite or alternative geometric mean calculation methodology are discussed in greater detail in the CY 2022 OPPTS/ASC final rule with comment period.

We note that, for purposes of identifying significant HCPCS codes for examination in the 2 times rule, we consider codes that have more than 1,000 single major claims or codes that have both greater than 99 single major claims and contribute at least 2 percent of the single major claims used to establish the APC geometric mean cost to be significant. This longstanding definition of when a HCPCS code is significant for purposes of the 2 times rule was selected because we believe that a subset of 1,000 claims is negligible within the set of approximately 92 million single procedure or single session claims we use for establishing geometric mean costs. Similarly, a HCPCS code for which there are fewer than 99 single claims and which comprises less than 2 percent of the single major claims within an APC will have a negligible impact on the APC geometric mean.

PART 2 – BUDGET NEUTRALITY, OUTLIER THRESHOLD, AND IMPACT CALCULATIONS

After converting geometric mean costs into unscaled weights by dividing the geometric mean cost for each APC by the geometric mean cost for APC 5012, the final outpatient clinic visit APC in CY 2022, we began the process of calculating budget neutrality adjustments and the outlier threshold to determine final payment rates. The result of all final payment policies are presented in the impact table in Section XXIV. Regulatory Impact Analysis of the CY 2022 OPPTS/ASC final rule with comment period. The following discussion provides greater detail about our manipulation of the claims to calculate budget neutrality adjustments, to estimate outlier thresholds, and to create the impact table and overall beneficiary copayment percentage. The discussion below supplements discussion already provided in the final rule with comment period about calculation of the weight scalar, the conversion factor, the hospital and CMHC outlier thresholds, and the impact table columns.

STAGE 6: Created Summary Service Utilization Files for Current and Prospective OPPTS Year by Provider

We began the budget neutrality calculations by making the services, utilization, and APC assignment on the CY 2019 claims look like they would if they were paid in the current OPPTS year, CY 2021, and the prospective OPPTS year, CY 2022. We created a summary utilization file for services in the CY 2019 claims database that would be paid under the 2021 OPPTS and a summary utilization file for services that would be paid under the final 2022 OPPTS. In essence, this step runs the claims with payable OPPTS services through a mock Integrated Outpatient Code Editor (IOCE) and Pricer for the current and prospective year and then summarizes utilization by provider, APC, HCPCS, and status indicator. Updated October 2021 IOCE specifications (v223.R1) are available at:

<https://www.cms.gov/Medicare/Coding/OutpatientCodeEdit/OCEQtrReleaseSpecs.html>

We constructed a summary utilization file for the CY 2022 OPPTS final rule with comment period using single and multiple bills from STAGE 2 of this document (n=117,791,585), the partial hospitalization claims (n=49,111) from STAGE 1, and those from CMHCs (n=10,934) from Pre-STAGE 1. In this summary process, we identified line-items that were not payable under OPPTS, including units on drugs and biologicals greater than the upper trim level identified in the units trim discussed in STAGE 1, units greater than 100 for procedure codes, a status indicator that is not payable under OPPTS (SI=A, B, E, C, D, F, L, M), and 0 units on a claim line without an associated charge. We specifically included the pseudo singles for claims with a separately paid Q2 or Q1 code created from the multiple minor claims in STAGE 3 of the claims process. After changes in utilization and the addition of final CY 2022 payment policies, we summarized these files to a single CY 2022 summary file of 3,792,341 observations from 3,620 hospitals (including cancer and children's hospitals) and 39 CMHCs, which only provide one service, partial hospitalization. We used this summary file as the basis for modeling the CY 2022 weight in the weight scalar calculation and estimated payment in CY 2022 in the CY 2022 final rule with comment period impact table.

We also constructed a baseline summary utilization file to reflect the existing CY 2021 OPPTS. For the CY 2021 OPPTS baseline file, we began with the single and multiple bills from STAGE 2, the pseudo single claims for codes with status indicator Q1 and Q2 created from the multiple minor claims, and the same partial hospitalization and CMHC claims listed above. We summarized this second set of files to a single file of 3,780,419 services by hospitals and CMHCs. We used this summary file as the basis for modeling the current CY 2021 weight in the weight scalar calculation and estimated payment in CY 2021 of the impact table.

Utilization in both of these files includes changes for "discounting," which is any change in payment, applied to the line-item units for a specific service on a claim, resulting from application of the multiple procedure discounting to services with status indicator T or the presence of a modifier indicating that the procedure was terminated. For 2022, we used unscaled weights, the APC geometric mean cost divided by the geometric mean cost for final APC 5012, to order services on each claim for application of multiple procedure discounting because scaled weights are not yet available.

We took a few additional steps to prepare both files for budget neutrality calculations. We adjusted units to accommodate changes in HCPCS descriptions and new HCPCS between 2019 and 2022. The final summary utilization file for the prospective CY 2022 OPPTS contains 3,792,414 (including CMHCs) observations for 3,659 providers, and the final summary utilization file for the current 2021 OPPTS contains 3,780,492 (including CMHCs) observations for 3,659 providers.

Each observation in these summary files includes one provider OSCAR, one HCPCS code, the SI for the HCPCS code, the APC to which the HCPCS is assigned, and the sum of discounted units of that HCPCS code furnished by that hospital.

Balance prospective CY 2022 = 3,792,414 HCPCS, by SI, by APC, by Provider

Balance baseline CY 2021 = 3,780,492 HCPCS, by SI, by APC, by Provider

STAGE 7: Calculated the Weight Scalar

The weight scalar is the budget neutrality adjustment for annual APC recalibration and its calculation is discussed in section II.A. of the CY 2022 OPPTS/ASC final rule with comment period. The weight scalar compares total scaled weight under the current OPPTS for 3,659 providers to total unscaled weight under the prospective OPPTS for the same providers, holding wage adjustment and rural adjustment constant to the current year's adjustments. We estimated wage adjusted weight for each provider using the formula provided in section II.H. of the CY 2022 OPPTS/ASC final rule with comment period without multiplying by the conversion factor, which is held constant. For example, for a procedure with SI=S provided by an urban hospital, the total weight for a service would be calculated:

$$(\text{UNSCALED_2022_WEIGHT} \times .4 + \text{UNSCALED_2022_WEIGHT} \times .6 \\ \times \text{CY2021_WAGE_INDEX}) \times \text{TOTAL_DISCOUNTED_UNITS}$$

For a procedure with SI=S provided by a rural sole community hospital, the total weight for a service would be calculated:

$$\text{(UNSCALED_2022_WEIGHT*.4+UNSCALED_2022_WEIGHT*.6} \\ \text{*CY2022_WAGE_INDEX)*TOTAL_DISCOUNTED_UNITS *1.071}$$

For a specified covered outpatient drug with SI=K provided by any hospital, the total weight for a service would be calculated:

$$\text{UNSCALED_2022_WEIGHT*TOTAL_DISCOUNTED_UNITS}$$

Scaling does not apply to OPPS services that have a predetermined payment amount, especially separately paid drugs and biologicals and new technology APCs. Items with a predetermined payment amount were included in the budget neutrality comparison of total weight across years by using a weight equal to the payment rate divided by the CY 2022 final rule conversion factor. However, scaling of the relative payment weights only applies to those items that do not have a predetermined payment amount. Specifically, we remove the total amount of weight for items with predetermined payment amount in the prospective year from both the prospective and current year and calculate the weight scalar from the remaining difference. In doing this, those services without a predetermined payment amount would be scaled by the proportional amount not applied to the services with a predetermined payment amount. We do not make any behavioral predictions about changes in utilization, case mix, or beneficiary enrollment when calculating the weight scalar.

Balance prospective CY 2022 = 3,659 providers

Balance baseline CY 2021 = 3,659 providers

Final CY 2022 weight scalar = 1.4416

STAGE 8: Calculated the Wage and Provider Adjustments

We used the same providers to estimate the budget neutrality adjustment for adopting the final IPPS FY 2022 post reclassification wage index for the CY 2022 OPPS, discussed in section II.C. of the CY 2022 OPPS/ASC final rule with comment period. Using the same wage-adjusted

weight formulas presented above, the wage adjustment compares differences in total scaled, proposed CY 2022 weight providers varying only the wage index between CY 2021 and CY 2022, and using the 2021 rural adjustment. The budget neutrality adjustment for changes in the wage index is 1.0000 (noting that this is based on the calculation of two wage index adjustments: the standard one comparing budget neutral wages from year to year, and a separate one to ensure budget neutrality based on the final FY/CY 2022 cap on wage index decreases of 5 percent). We did not make changes to our rural adjustment policy this year. Therefore, the budget neutrality adjustment for the rural adjustment is 1.0000.

We used the same providers to estimate the budget neutrality adjustment for the final dedicated cancer hospital adjustment for the CY 2022 OPPTS, discussed in section II.F. of the CY 2022 OPPTS/ASC final rule with comment period. We calculated a CY 2022 budget neutrality adjustment factor by comparing the estimated total CY 2022 payments under section 1833(t) of the Act, including the CY 2022 cancer hospital adjustment relative to the CY 2021 cancer hospital adjustment under section 1833(t)(18)(B) and 1833(t)(2)(E) of the Act, to hospitals described in section 1886(d)(1)(B)(v) of the Act, excluding the TOPs adjustment. Because the final PCR target remains the same in CY 2022 as it was in CY 2021, the final budget neutrality adjustment for the final CY 2022 cancer hospital adjustment is 1.0000.

The final payment policy for drugs purchased under the 340B Program, as described in section V.B.6. of this final rule, requires no separate budget neutrality because we continue to pay for non-pass through separately paid drugs acquired the 340B Drug Program at ASP minus 22.5 percent.

Balance CY 2022 providers = 3,659

Total wage index adjustment to the conversion factor = 1.0000 (1.0001 standard adjustment, 0.9999 cap decrease adjustment)

Total rural adjustment to the conversion factor = 1.0000

Total cancer hospital adjustment to the conversion factor = 1.0000

Total budget neutrality adjustment to the conversion factor = 1.0000

Table 1. Calculation of the Final 2022 OPPTS Conversion Factor

Steps	2021 OPPS CF	Return PT and outliers (/)	Wage Index (x)	Wage Index cap (x)	Cancer Hospital (x)	Rural Hospital (x)	340B Adjustment	Hospital Outpatient Update (x)	Remove PT, Adjustment for Drugs and Devices PT expiring between Dec 31, 2021 and Sep 30, 2022, and outliers (x)	2022 OPPS CF
Value applied		(1-.01- .0092)	1.0001	0.9999	1.0000	1.0000	1.0000	1.02	(1-.01-.0124)	
CF	82.797	84.418	84.426	84.418	84.418	84.418	84.418	86.106	84.177	84.177

STAGE 9: Calculated Hospital Outlier Threshold

We started with aggregated claims from the single and multiple bills, pseudo singles from the multiple minor file, and partial hospitalization files to model the hospital fixed dollar hospital outlier threshold. We used 105,171,522 claims to estimate the outlier threshold as well as anticipated outlier payment by provider. We created a CCR for every hospital in our hospital base file of 3,620 hospitals using the April 2020 update to the Outpatient Provider Specific File, which contains the actual overall CCRs the fiscal intermediaries or MACs used to make outlier payments in CY 2020. We used internally calculated CCRs to substitute for any missing CCRs on the April 2020 OPSF update, and we substituted the statewide CCR for providers with CCRs greater than the 1.5 upper limit. We did not estimate the CMHC threshold this year, instead proposing to continue in CY 2022 the policy of 3.4 times payment for APC 5853 (Partial Hospitalization (3 or more services per day) for CMHCs). We continue to apply the standard OPPTS outlier policy for all other hospitals to the hospital-based PHP APCs.

As discussed in section II.G. of the CY 2022 OPPTS/ASC final rule with comment period, we simulated CY 2022 costs by applying a charge inflation factor of 1.2049 to charges on the CY 2019 claims and by applying the CCR adjustment of 0.94965 to the April 2020 OPSF CCRs. We compared estimated cost to wage adjusted payment for each separately paid service on each claim. Holding the multiple threshold constant at 1.75 times the APC payment amount, we iterated total outlier payment calculations, changing the size of the fixed dollar threshold each time, until total outlier payments matched our estimate of 1.0 percent of total payment on all included claims. Using the resulting \$6,175 fixed dollar threshold, we estimated outlier payments for 2,744 hospitals for column 5 of the impact table.

We repeated this exercise for the current year CY 2021 OPPTS. We used 105,171,528 claims to estimate the percentage of total payment attributable to outlier payments in 2021. We inflated charges on the CY 2019 claims by an inflation factor of 1.13218 for two years, a CCR inflation factor of 0.974495 for one year, and using the CCRs from the April 2020 update to the Outpatient Provider Specific File, we estimated costs and compared them to wage-adjusted CY 2021 payment for CY 2021 each service. Ultimately, we estimated outlier payments for 2,817 hospitals for column 5 of the impact table. We also estimated total outlier payments to be 1.0 percent of total CY 2022 OPPTS payments.

Balance CY 2022 = 2,817 hospitals

Balance baseline CY 2021 = 2,744 hospitals

STAGE 10: Created the Impact Table and Calculated the Beneficiary Impact Percentage

The impact table in section XXIV. Regulatory Impact Analysis of the CY 2022 OPPTS/ASC final rule with comment period compares OPPTS payment for 3,659 providers in the baseline CY 2021 file to the final CY 2022 OPPTS payment for the same set of hospitals, in aggregate and across classes of hospitals. We began with the summary utilization files created in STAGE 6 and

recreated each of the above total weight calculations (weight scalar, wage adjustment, rural adjustment) as payments by adding in the conversion factor. We compared the difference in payments between those under the CY 2022 final rule with comment period to the baseline CY 2021 payment and we show this result in column 2. The detailed calculations behind the table columns are discussed in section XXIV. of the CY 2022 OPPTS/ASC final rule with comment period. Final rule payment presented in column 5 of the impact table compares total estimated payment, including outlier payments, but excludes pass-through payment for the current and prospective years.

In order to group types of hospitals, we constructed a file of descriptive information from the cost report and IPPS provider files identifying different classes of hospitals. This file contains the variables we use to model adjustments including the wage index, geographic location, and provider type, as well as other descriptive information, such as bed size. We have complete information for the 3,620 hospitals with any claim used to model the final OPPTS. We do not have complete descriptive information for the 39 CMHCs because they are not hospitals paid under IPPS. We make available an impact file that contains all descriptive information for the providers that we used in our calculations, as well as estimated CY 2022 payments, including outlier payments, by provider for the subset of 3,552 hospitals excluding children's and cancer hospitals, which are permanently held harmless, and 39 CMHCs for which we present detailed information in the impact table that accompanies the CY 2022 OPPTS/ASC final rule with comment period.

Finally, we estimated the overall beneficiary copayment percentage for the current and prospective OPPTS years. We applied the calculated, adjusted (wage, rural, and cancer) copayment to all separately paid HCPCS, and we capped copayment at the inpatient deductible. We summed total copayments for each year and divided by respective total payment. We estimate that total beneficiary liability for copayments would be 18.2 percent in CY 2022.

Blood, Brachytherapy, Drugs, and Radiopharmaceutical Payment Rates

As mentioned in STAGE 1, we copied line items for drugs, radiopharmaceuticals, blood, and brachytherapy sources (the lines stay on the claim but are copied off onto another file) to a separate file (n=433,894,671). No claims were deleted. For the drug line items, we further implement a trim that examines paid PN lines (n=226,666). We note 1,564,879 drug lines are billed with paid PO modifiers. We use these line items to calculate per unit per day cost information for drugs (including therapeutic radiopharmaceuticals) and blood. We trimmed units at +/- 3 standard deviations from the geometric mean unit, and then +/- 3 standard deviations from the geometric mean unit cost, before calculating costs per unit and per day. For drugs and biologicals, we used the July 2021 ASP plus 6 percent and multiplied that amount by the average number of units per day for each drug or biological to arrive at its per day cost. For items that did not have an ASP, we used CY 2019 hospital claims data to determine the per day cost. We use per day cost to determine whether a drug or biological is packaged.

For CY 2022, we continue to pay for separately payable drugs and biologicals under the OPPTS at ASP plus 6 percent for non-340B drugs, based upon the statutory default described in section 1833(t)(14)(A)(iii)(II) of the Act. We also continue to pay for non-pass through drugs acquired under the 340B program at ASP minus 22.5 percent. We note that beginning in CY 2019 we began applying this adjustment to separately payable non-pass through drugs when billed by a nonexcepted provider based department. We refer readers to section V. of the CY 2022 OPPTS/ASC final rule for a complete discussion of our policy to pay for separately paid drugs and biologicals.

The payment rates for blood and blood products were based on simulated geometric mean costs under a different methodology that is explained in the CY 2022 OPPTS/ASC final rule with comment period.

Comprehensive APC Payment Rates

The comprehensive APC (C-APC) payment model is being developed to simplify reporting and payment provision for high cost, complex outpatient procedures by accounting for all costs and component services typically involved in the provision of the complete primary procedure.

Claims that contain at least one J1 procedure code are separated from the usual OPPTS modeling to undergo comprehensive specific modeling. The comprehensive cost modeling incorporates the costs of a wider range of procedures into a claim's primary service than the usual OPPTS modeling. Like OPPTS modeling, costs of packaged procedure codes (status indicators N, Q1, Q2) and packaged un-coded revenue centers are included in the claim modeled cost. Unlike OPPTS modeling, costs on the claim from major OPPTS procedure codes (status indicators P, S, T, and V), lower ranked comprehensive procedure codes (status indicator J1), non-pass-through drugs and biologicals (status indicator K), and blood products (status indicator R) are also packaged into the primary comprehensive procedure. Ambulance services; mammography services; pass-through drugs and devices (status indicator G and H); brachytherapy services (status indicator U); preventive services; corneal tissue, CRNA services, hepatitis B vaccine (status indicator F); influenza and pneumococcal pneumonia vaccines (status indicator L); comprehensive Observation services (status indicator J2), and new technology procedures (APCs 1491-1599, 1901-1908) are excluded from comprehensive packaging.

In addition, for the remainder of the PHE for COVID-19, new COVID-19 treatments that meet the following criteria are also excluded from comprehensive packaging: 1) The treatment must be a drug or biological product (which could include a blood product) authorized to treat COVID-19, as indicated in section "I. Criteria for Issuance of Authorization" of the letter of authorization for the drug or biological product, or the drug or biological product must be approved by the FDA for treating COVID-19 2) The emergency use authorization (EUA) for the drug or biological product (which could include a blood product) must authorize the use of the product in the outpatient setting or not limit its use to the inpatient setting, or the product must be approved by the FDA to treat COVID-19 disease and not limit its use to the inpatient setting.

When assigning claims reporting J1 primary services to comprehensive APCs, as configured in the current payment year, a ranking of the primary (J1) HCPCS codes is first generated using the comprehensive modeled geometric mean costs from claims reporting only one J1 service. The ranking can be found in the Addendum J “Rank for Primary Assignment” table and includes the frequency of service lines in the full OPPTS claims population for reference, the frequency of single J1 unit claims used for ranking development, the modeled comprehensive APC geometric mean cost which determines the relative rank of C-APCs, and the modeled comprehensive HCPCS geometric mean cost which determines the relative rank of J1 services within each C-APC. This is a universal ranking of all J1 services that is used to initially assign all claims reporting J1 services within the C-APCs as configured in the current payment year from highest to lowest cost except for J1 services that map to different C-APCs as configured in the current payment year. Comprehensive claims that report a single J1 service assign the J1 HCPCS code as their primary. When comprehensive claims report more than 1 J1 code, the J1 service assigned to the highest cost C-APC (or, if multiple J1 services are assigned to the same APC, then the highest cost J1 code at the HCPCS level), as indicated by the ranking, is identified as primary for the multiple J1 procedure claim, and the claim is mapped to the J1 identified as primary. The “Total Frequency” parameter for J1 services indicated in the CPT and APC Cost Statistics files indicates the number of comprehensive claims whose primary is assigned to the indicated service after application of complexity adjustments.

C-APC claims that contain two or more J1 service units, that contain a J1 bilateral service with modifier 50, or that contain certain add-on procedure codes may be eligible for a complexity adjustment that promotes the claim to the next higher cost APC within the primary procedure’s clinical family. The complexity adjustments are developed for frequently occurring combinations that significantly increase the cost of the primary procedure claim. Eligibility of combinations for complexity adjustment is assessed using C-APC claims that contain two or more J1 service units or that contain one J1 service unit and one unique add-on code (from the limited list of add-on codes for primes with status indicator J1). The combinations assigned to these claims correspond to the two highest rank J1 services reported on the claim for J1 combinations or the claim’s only reported J1 service and add-on service for add-on combinations. The frequency of combinations is then calculated from this claim subset and the comprehensive geometric mean costs are

modeled for each combination using this claim subset. Combinations eligible for complexity adjustment must 1) have a frequency of 25 or more from this claim subset and 2) have a modeled geometric mean cost that is a factor of 2 or greater than the comprehensive geometric mean cost of the lowest significant HCPCS in the primary procedure's APC when modeled without the application of complexity adjustments. Claims with primary or secondary J1 services reported with modifier -73 or -74 were excluded from the complexity adjustment evaluation. The "Complexity Adj. Evaluation" table in Addendum J shows all combinations evaluated for complexity adjustment eligibility along with the complexity adjusted APC to which the combination's claims would be promoted, the frequency of combinations from the claim subset described above, the modeled geometric mean cost of the combinations from the claim subset described above, and the eligibility cost threshold determined by two times the comprehensive geometric mean cost of the lowest significant HCPCS in the primary procedure's APC when modeled without complexity adjustments.

Before modeling C-APC cost statistics, all comprehensive claims are assessed for complexity adjustments based on the list of eligible combinations in the Addendum J "Complexity Adjustments" table. Claims receiving complexity adjustments must have an eligible combination's primary service identified as the claim's primary J1 service and must report the combination's corresponding secondary service (regardless of the other services reported). Complexity adjusted claims are removed from modeling of the original primary service and reassigned to the adjusted primary and described by a code of the following general type: [first 4 characters of HCPCS] + [last character of HCPCS mapped to adjustment character] (1=A, 2=B, 3=C, 4=D, 5=E, 6=G, 7=Q, 8=R, 9=S, 0=X, T=Z). All complexity adjusted claims with the same original primary are modeled under the same adjusted primary. The adjusted primary is assigned to the combination's complexity adjusted APC found in the Addendum J "Complexity Adjustments" table that corresponds to the next higher cost C-APC in the original primary procedure's clinical family of C-APCs relative to the claim's original C-APC, and the claim is modeled under this higher cost C-APC.

Comprehensive Observation Modeling

As part of the expansion of the C-APC payment policy methodology, payment for all qualifying extended assessment and management encounters [formerly APC 8009 “Extended Assessment and Management (EAM)” composite] will be paid through final C-APC 8011 “Comprehensive Observation Services”. The status indicator of J2 is assigned to C-APC 8011 to distinguish between the logic required to identify the claims qualifying for the new C-APC 8011 and the other C-APCs. A claim qualifies for C-APC 8011 when it contains a specific combination of services performed with each other, as opposed to the presence of a single service identified by status indicator J1 for all other C-APCs.

Claims that qualify for C-APC 8011 are separated from the usual OPPTS modeling to undergo comprehensive specific modeling. C-APC 8011 modeling claims are identified by meeting the following criteria: 1) claim does not contain a HCPCS code with status indicator T; 2) claim contains 8 or more units of service for G0378 (observation services, per hour); 3) claim contains one of the following codes: G0379 (direct referral of patient for hospital observation care) on the same date of service as G0378; 99281, 99282, 99283, 99284, 99285 (emergency department visit for the evaluation and management of a patient (Levels 1-5)), G0380, G0381, G0382, G0383, G0384 (type B emergency department visit (Levels 1-5)), 99291 (critical care, evaluation and management of the critically ill or critically injured patient; first 30-74 minutes), or G0463 (hospital outpatient clinic visit for assessment and management of a patient) provided on the same date of service or 1 day before the date of service for G0378; 4) claim does not contain a HCPCS code with status indicator J1.

All claims that meet the criteria for C-APC 8011 are used in ratesetting and to develop the geometric mean cost of the comprehensive service based on the costs of all reported OPPTS payable services reported on the claim (excluding all preventive services and certain Medicare Part B Inpatient services according to the comprehensive modeling policy described above).

Device Offset Calculation

This section reviews how device offsets are calculated and the differences between the OPPTS device offset calculation and the ASC device offset calculation.

During the cost modeling process, for single and pseudo single major claims, we identify if each line falls under the device category using the HCPCS code if the line contains one, or the revenue center code for services that do not have a HCPCS code. Devices are categorized for a calendar year based on the format provided to the Integrated Outpatient Code Editor (I/OCE) for the January quarter. Devices receiving pass-through payment status are removed from the device category as such cost is not included in the total cost of the procedure. Revenue centers for uncoded services include codes assigned to “0275”, “0276”, “0278”, and “0624” revenue centers, as these were the revenue codes applicable when estimating costs using CCRs from the Implantable Devices cost center (73 FR 48462). For more information on how cost is derived from charge and CCRs, see General Information under Part 1 – Cost Calculations of this claims accounting narrative.

The total device cost of the procedure is the sum total of all device line costs included on the claim. The non-device offset amount for each claim is calculated by subtracting the sum total device cost of the payable procedure (as well as any device costs associated with packaged procedures) from the total cost of the procedure. The total cost of the procedure (both the device and non-device cost) are adjusted by the applicable wage index. The device offset percentage is calculated by dividing the geometric mean of the standardized non device offset amount by the geometric mean of the standardized total cost, and then subtracting this ratio from 1.

While the calculation method for the device offset percentage and the device offset amount for each HCPCS are the same between OPPTS and ASC, the cost inputs differ between the OPPTS and ASC systems. The comprehensive APC ratesetting methodology used for many OPPTS services dictates that, in addition to packaged HCPCS codes and packaged uncoded revenue centers, lower ranked J1 and other separately payable codes’ costs will be added to the claim’s modeled cost. As a result, because we are unable to ensure that packaged costs can be appropriately

allocated across multiple separately payable procedures performed on the same date of service, many claims containing J1 codes become unusable under the ASC rate setting methodology which does not use comprehensive APCs.

Under the **comprehensive ratesetting methodology** for the OPPTS, claims that contain at least one J1 procedure code (hereinafter referred to as “J1 claims”) are separated from standard OPPTS modeling to undergo comprehensive-specific modeling. For more information on the comprehensive ratesetting methodology, see the Comprehensive APC Payment Rates section of this claims accounting narrative.

Under the **standard ratesetting methodology** for the ASC payment system, J1 claims are treated the same as claims that contain separately payable procedure code(s) (status indicators S, T, V, J1, and J2). If a J1 claim contains only one J1 procedure code and no other separately payable codes, this J1 claim will be identified as single major claim. If a J1 claim contains other separately payable code(s) and no packaged procedure code, each of the separately payable code will be extracted to form a pseudo single claim. If a J1 claim contains other separately payable code(s) and packaged procedure codes on the same service date, this claim becomes unusable because we are unable to ensure that packaged costs can be appropriately allocated across multiple separately payable procedures performed on the same date of service. For each single or pseudo single claim that contains a J1 procedure code, the cost of packaged procedure codes and packaged un-coded revenue centers will be included in the claim modeled cost.

Statewide Average Default CCRs

For CY 2022, we continue to use our standard methodology of calculating the statewide average default CCRs using the same hospital overall CCRs that we use to adjust charges to costs on claims data for setting the final CY 2022 OPPTS relative payment weights. The final CCRs represent the ratio of total costs to total charges for those cost centers relevant to outpatient services from each hospital's most recently submitted cost report, weighted by Medicare Part B charges. We also adjust ratios from submitted cost reports to reflect the final settled status by applying the differential between settled to submitted overall CCRs for the cost centers relevant to outpatient services from the most recent pair of final settled and submitted cost reports. We then weight each hospital's CCR by the volume of separately paid line-items on hospital claims corresponding to the year of the majority of cost reports used to calculate the overall CCRs. We refer readers to the CY 2008 OPPTS/ASC proposed rule with comment period (72 FR 66680 through 66682) and prior OPPTS rules for a more detailed discussion of our established methodology for calculating the statewide average default CCRs, including the hospitals used in our calculations and our trimming criteria.

For Maryland, we continue to use an overall weighted average CCR for all hospitals in the Nation as a substitute for Maryland CCRs. Few hospitals in Maryland are eligible to receive payment under the OPPTS, which limits the data available to calculate an accurate and representative CCR. The weighted CCR is used for Maryland because it takes into account each hospital's volume, rather than treating each hospital equally. We refer readers to the CY 2005 OPPTS final rule with comment period (69 FR 65822) for further discussion and the rationale for our longstanding policy of using the national average CCR for Maryland. In general, observed changes in the statewide average default CCRs between CY 2021 and CY 2022 are modest and the few significant changes are associated with areas that have a small number of hospitals.

CCRs used in OPPTS Ratesetting

Since the implementation of the OPPTS, some commenters have raised concerns about potential bias in the OPPTS cost-based weights due to “charge compression,” which is the practice of applying a lower charge markup to higher cost services and a higher charge markup to lower cost services. As a result, the cost-based weights may reflect some aggregation bias, undervaluing high-cost items and overvaluing low-cost items when an estimate of average markup, embodied in a single CCR, is applied to items of widely varying costs in the same cost center. This issue was evaluated in a report by the Research Triangle Institute, International (RTI). The RTI final report can be found on RTI’s Web site at: http://www.rti.org/reports/cms/HHSM-500-2005-0029I/PDF/Refining_Cost_to_Charge_ratios_200807_Final.pdf. For a complete discussion of the RTI recommendations, public comments, and our responses, we refer readers to the CY 2009 OPPTS/ASC final rule with comment period (73 FR 68519 through 68527).

We addressed the RTI finding that there was aggregation bias in both the IPPTS and the OPPTS cost estimation of expensive and inexpensive medical supplies in the FY 2009 IPPTS final rule (73 FR 48458 through 45467). Specifically, we created one cost center for “Medical Supplies Charged to Patients” and one cost center for “Implantable Devices Charged to Patients,” essentially splitting the then current cost center for “Medical Supplies Charged to Patients” into one cost center for low-cost medical supplies and another cost center for high-cost implantable devices in order to mitigate some of the effects of charge compression. In determining the items that should be reported in these respective cost centers, we adopted commenters’ recommendations that hospitals should use revenue codes established by the AHA’s NUBC to determine the items that should be reported in the “Medical Supplies Charged to Patients” and the “Implantable Devices Charged to Patients” cost centers. For a complete discussion of the rationale for the creation of the new cost center for “Implantable Devices Charged to Patients,” a summary of public comments received, and our responses to those public comments, we refer readers to the FY 2009 IPPTS final rule.

The cost center for “Implantable Devices Charged to Patients” has been available for use for cost reporting periods beginning on or after May 1, 2009. In the CY 2013 OPPTS/ASC final rule with comment period, we determined that a significant volume of hospitals were utilizing the

“Implantable Devices Charged to Patients” cost center. Because a sufficient amount of data from which to generate a meaningful analysis was available, we established in the CY 2013 OPPTS/ASC final rule with comment period a policy to create a distinct CCR using the “Implantable Devices Charged to Patients” cost center (77 FR 68225). We retained this policy through CY 2020, and we continue this practice for the CY 2022 OPPTS.

In the FY 2011 IPPS/LTCH PPS final rule (75 FR 50075 through 50080), we finalized our proposal to create new standard cost centers for “Computed Tomography (CT),” “Magnetic Resonance Imaging (MRI),” and “Cardiac Catheterization,” and to require that hospitals report the costs and charges for these services under these new cost centers on the revised Medicare cost report Form CMS 2552-10. As we discussed in the FY 2009 IPPS and CY 2009 OPPTS/ASC proposed and final rules, RTI also found that the costs and charges of CT scans, MRIs, and cardiac catheterization differ significantly from the costs and charges of other services included in the standard associated cost center. RTI concluded that both the IPPS and the OPPTS relative payment weights would better estimate the costs of those services if CMS were to add standard cost centers for CT scans, MRIs, and cardiac catheterization in order for hospitals to report separately the costs and charges for those services and in order for CMS to calculate unique CCRs to estimate the cost from charges on claims data. We refer readers to the FY 2011 IPPS/LTCH PPS final rule (75 FR 50075 through 50080) for a more detailed discussion on the reasons for the creation of standard cost centers for CT scans, MRIs, and cardiac catheterization. The new standard cost centers for CT scans, MRIs, and cardiac catheterization were effective for cost report periods beginning on or after May 1, 2010, on the revised cost report Form CMS-2552-10.

In our CY 2014 OPPTS/ASC final rule discussion (78 FR 43549), we noted that, for CY 2014, the estimated changes in geometric mean estimated APC cost of using data from the new standard cost centers for CT scans and MRIs appeared consistent with RTI’s analysis of cost report and claims data in the July 2008 final report (pages 5 and 6). RTI concluded that “in hospitals that aggregate data for CT scanning, MRI, or nuclear medicine services with the standard line for Diagnostic Radiology, costs for these services all appear substantially overstated, while the costs for plain films, ultrasound and other imaging procedures are correspondingly understated.” We

also noted that there were limited additional impacts in the implantable device-related APCs from adopting the new cost report Form CMS 2552 10 because we had used data from the standard cost center for implantable medical devices beginning in CY 2013 OPPTS ratesetting, as discussed above.

As we indicated in prior rulemaking (77 FR 68223 through 68225), once we determined that cost report data for the new standard cost centers were sufficiently available, we would analyze that data and, if appropriate, we would use the distinct CCRs for new standard cost centers described above in the calculation of the OPPTS relative payment weights. As stated in the CY 2014 OPPTS/ASC final rule with comment period (78 FR 74847), we conducted our analysis and concluded that we should develop distinct CCRs for each of the new cost centers and use them in ratesetting. Therefore, we began in the CY 2014 OPPTS, and are retaining this practice for the CY 2022 OPPTS, to calculate the OPPTS relative payment weights using distinct CCRs for cardiac catheterization, CT scan, MRI, and implantable medical devices.

In the CY 2014 OPPTS/ASC final rule with comment period (78 FR 74847), we finalized a policy to remove claims from providers that use a cost allocation method of “square feet” to calculate CCRs used to estimate costs associated with the CT and MRI APCs. This change allows hospitals additional time to use one of the more accurate cost allocation methods, and thereby improve the accuracy of the CCRs on which the OPPTS relative payment weights are developed.

As part of the transitional policy to estimate the CT and MRI APC relative payment weights using only cost data from providers that do not use “square feet” as the cost allocation statistic, we adopted a policy in the CY 2014 OPPTS/ASC final rule with comment period that we will sunset this policy in 4 years once the updated cost report data become available for ratesetting purposes. We stated that we believed 4 years was sufficient time for hospitals that have not done so to transition to a more accurate cost allocation method and for the related data to be available for ratesetting purposes. However, in response to provider concerns and to provide added flexibility for hospitals to improve their cost allocation methods, we finalized our proposal to extend the transition policy an additional year, for the CY 2019 OPPTS. Therefore, in CY 2020 we proposed to develop the CT and MRI APC relative payment weights using cost data from all

providers, regardless of the cost allocation statistic employed. As discussed in section II.A. of the CY 2020 OPPTS/ASC final rule, we implemented a transition towards use of full cost report data. Therefore, in the CY 2020 OPPTS, these imaging APCs weights were based on the average of their geometric mean cost from full use of cost report data and our prior transition policy. However, in the CY 2021 OPPTS we completed that transition towards full adoption of these cost centers and are therefore using all data in ratesetting for the CT and MRI imaging APCs, as discussed further in section II.A.1.a. of the CY 2022 OPPTS/ASC final rule.

In summary, we are continuing to use data from the “Implantable Devices Charged to Patients” and “Cardiac Catheterization” cost centers to create distinct CCRs for use in calculating the OPPTS relative payment weights for the CY 2022 OPPTS. For the “Magnetic Resonance Imaging (MRI)” and “Computed Tomography (CT) Scan” APCs, we are using all claims for cost modeling for the CT and MRI APCs in the CY 2022 OPPTS.

Revenue Code Use in OPPTS Ratesetting

As noted in the CY 2008 OPPTS/ASC final rule with comment period (72 FR 66606), for the CY 2008 OPPTS, we adopted an APC Panel recommendation that CMS should review the final list of packaged revenue codes for consistency with OPPTS policy and ensure that future versions of the I/OCE edit accordingly. As we have in the past, we are proposing continue to compare the final list of packaged revenue codes that we adopt for CY 2022 to the revenue codes that the I/OCE will package for CY 2022 to ensure consistency.

In the CY 2009 OPPTS/ASC final rule with comment period (73 FR 68531), we replaced the NUBC standard abbreviations for the revenue codes listed in Table 2 of the CY 2009 OPPTS/ASC final rule with the most current NUBC descriptions of the revenue code categories and subcategories to better articulate the meanings of the revenue codes without changing the list of revenue codes. In the CY 2010 OPPTS/ASC final rule with comment period (74 FR 60362

through 60363), we finalized changes to the packaged revenue code list based on our examination of the updated NUBC codes and public comment on the CY 2010 final list of packaged revenue codes.

For CY 2022, we reviewed the changes to revenue codes that were effective during CY 2014 for purposes of determining the charges reported with revenue codes but without HCPCS codes that we are proposing to package for CY 2022. We believe that the charges reported under the revenue codes listed in Table 2 below continue to reflect ancillary and supportive services for which hospitals report charges without HCPCS codes. Therefore, for CY 2022, we continue to package the costs that we derive from the charges reported without HCPCS codes under the revenue codes displayed in the table below for purposes of calculating the geometric mean costs on which the final CY 2022 OPPS/ASC payment rates are based.

TABLE 2. FINAL CY 2022 PACKAGED REVENUE CODES

Revenue Code	Description
250	Pharmacy; General Classification
251	Pharmacy; Generic Drugs
252	Pharmacy; Non-Generic Drugs
254	Pharmacy; Drugs Incident to Other Diagnostic Services
255	Pharmacy; Drugs Incident to Radiology
257	Pharmacy; Non-Prescription
258	Pharmacy; IV Solutions
259	Pharmacy; Other Pharmacy
260	IV Therapy; General Classification
261	IV Therapy; Infusion Pump
262	IV Therapy; IV Therapy/Pharmacy Svcs
263	IV Therapy; IV Therapy/Drug/Supply Delivery
264	IV Therapy; IV Therapy/Supplies

Revenue Code	Description
269	IV Therapy; Other IV Therapy
270	Medical/Surgical Supplies and Devices; General Classification
271	Medical/Surgical Supplies and Devices; Non-sterile Supply
272	Medical/Surgical Supplies and Devices; Sterile Supply
275	Medical/Surgical Supplies and Devices; Pacemaker
276	Medical/Surgical Supplies and Devices; Intraocular Lens
278	Medical/Surgical Supplies and Devices; Other Implants
279	Medical/Surgical Supplies and Devices; Other Supplies/Devices
280	Oncology; General Classification
289	Oncology; Other Oncology
331	Radiology- Therapeutic and/or Chemotherapy Administration; Chemotherapy Admin – Injected
332	Radiology- Therapeutic and/or Chemotherapy Administration; Chemotherapy Admin – Oral
335	Radiology- Therapeutic and/or Chemotherapy Administration; Chemotherapy Admin – IV
343	Nuclear Medicine; Diagnostic Radiopharmaceuticals
344	Nuclear Medicine; Therapeutic Radiopharmaceuticals
360	Operating Room Services; General Classification
361	Operating Room Services; Minor Surgery
362	Operating Room Services; Organ Transplant- Other than Kidney
369	Operating Room Services; Other OR Services
370	Anesthesia; General Classification
371	Anesthesia; Anesthesia Incident to Radiology
372	Anesthesia; Anesthesia Incident to Other DX Services
379	Anesthesia; Other Anesthesia
390	Administration, Processing and Storage for Blood and Blood Components; General Classification
392	Administration, Processing and Storage for Blood and Blood Components; Processing and Storage
399	Administration, Processing and Storage for Blood and Blood Components; Other Blood Handling
410	Respiratory Services; General Classification
412	Respiratory Services; Inhalation Services
413	Respiratory Services; Hyperbaric Oxygen Therapy
419	Respiratory Services; Other Respiratory Services
621	Medical Surgical Supplies – Extension of 027X; Supplies Incident to Radiology
622	Medical Surgical Supplies – Extension of 027X; Supplies Incident to Other DX Services

Revenue Code	Description
623	Medical Supplies – Extension of 027X, Surgical Dressings
624	Medical Surgical Supplies – Extension of 027X; FDA Investigational Devices
630	Pharmacy – Extension of 025X; Reserved
631	Pharmacy – Extension of 025X; Single Source Drug
632	Pharmacy – Extension of 025X; Multiple Source Drug
633	Pharmacy – Extension of 025X; Restrictive Prescription
681	Trauma Response; Level I Trauma
682	Trauma Response; Level II Trauma
683	Trauma Response; Level III Trauma
684	Trauma Response; Level IV Trauma
689	Trauma Response; Other
700	Cast Room; General Classification
710	Recovery Room; General Classification
720	Labor Room/Delivery; General Classification
721	Labor Room/Delivery; Labor
722	Labor Room/Delivery; Delivery Room
724	Labor Room/Delivery; Birthing Center
729	Labor Room/Delivery; Other Labor Room/Delivery
732	EKG/ECG (Electrocardiogram); Telemetry
760	Specialty Services; General Classification
761	Specialty Services; Treatment Room
762	Specialty services; Observation Hours
769	Specialty Services; Other Specialty Services
770	Preventive Care Services; General Classification
801	Inpatient Renal Dialysis; Inpatient Hemodialysis
802	Inpatient Renal Dialysis; Inpatient Peritoneal Dialysis (Non-CAPD)
803	Inpatient Renal Dialysis; Inpatient Continuous Ambulatory Peritoneal Dialysis (CAPD)
804	Inpatient Renal Dialysis; Inpatient Continuous Cycling Peritoneal Dialysis (CCPD)
809	Inpatient Renal Dialysis; Other Inpatient Dialysis
810	Acquisition of Body Components; General Classification
815	Allogeneic Stem Cell Acquisition Services
819	Acquisition of Body Components; Other Donor
821	Hemodialysis-Outpatient or Home; Hemodialysis Composite or Other Rate
824	Hemodialysis-Outpatient or Home; Maintenance – 100%
825	Hemodialysis-Outpatient or Home; Support Services
829	Hemodialysis-Outpatient or Home; Other OP Hemodialysis
942	Other Therapeutic Services (also see 095X, an extension of 094x); Education/Training

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Revenue Code	Description
943	Other Therapeutic Services (also see 095X, an extension of 094X), Cardiac Rehabilitation
948	Other Therapeutic Services (also see 095X, an extension of 094X), Pulmonary Rehabilitation