ONPOINT Health Data

Issue Brief: Calculating Fee-For-Service Equivalents for Capitated Services

In the U.S. healthcare system, different health plans reimburse healthcare providers using different payment models. In the fee-for-service (FFS) model, providers submit a claim – an itemized bill listing the services provided to a patient – to the insurer and are typically reimbursed for the covered services detailed on the claim.

In a capitated model, however, providers are paid a fixed amount for each patient under their care, regardless of how many services were provided to each patient. A provider operating under a capitated payment arrangement still submits detailed information (often referred to as "encounter" data) to the insurer but receives no direct payment for those services.

All-payer claims databases (APCDs) collect claims paid under FFS models as well as encounter data for services paid under capitation models. For capitated services, many state APCDs require health plans to report an FFS equivalent – an estimate of what the plan would have paid for the service under an FFS model. This helps enable comparisons between different health plans, regardless of the type of payment arrangement.

Such comparisons, however, are only as good as the quality of the underlying data. In 2025, Onpoint worked extensively with one of our clients, the California Department of Health Care Access and Information (HCAI), to evaluate the quality of FFS equivalents submitted to the Health Care Payments Data (HPD) program, California's APCD. We then developed a methodology for imputing – or calculating a substitute value for – FFS equivalents from plans whose submitted data was determined to be questionable. We included these imputed values in HCAI's data sets, along with a flag to recommend the use of either the imputed FFS equivalent or the value provided by the submitter.

ABOUT CAPITATION

In the United States, the traditional fee-for-service (FFS) payment model emerged in the first half of the 20th century, alongside considerable growth of the health insurance market. Blue Cross Blue Shield plans used a reimbursement methodology known as "cost plus," where physicians were compensated according to "reasonable and customary charges" that they could set themselves, notes an overview in the *American Medical Association (AMA) Journal of Ethics.*

As healthcare spending increased over the following decades, capitation emerged as one possible remedy, typically used by health maintenance organizations (HMOs). It is still used today under the banner of "managed care."

Today, many models are moving toward "value-based care," where physicians are compensated not only for the services they provide but also for the quality of their patients' outcomes.

ASSESSING DATA QUALITY

The initial phase of this project involved an extensive quality evaluation of each submitter's FFS equivalents as reported to the HPD. Onpoint analysts surveyed the data to examine both of the following:

- **Reporting accuracy.** To assess accuracy, we examined whether services that were submitted under capitation were reported with $0 in the paid amount field (as submitters were instructed to do). This helped determine whether submitters were accurately categorizing capitated services.
- **Reasonableness.** We also examined the reported FFS equivalent values to see if they appeared reasonable. "Reasonableness" was defined as a FFS equivalent amount greater than $0 that was also higher than the member responsibility amount (i.e., co-pay, coinsurance, and deductible).

This analysis was performed for each HPD data submitter, service setting (i.e., inpatient, outpatient, and professional), payer type (i.e., commercial, Medicaid, or Medicare Advantage), and year. If a submitter passed quality checks for a given stratification (e.g., Insurer A, commercial, outpatient, 2021), their FFS equivalents were included in the imputation data set.

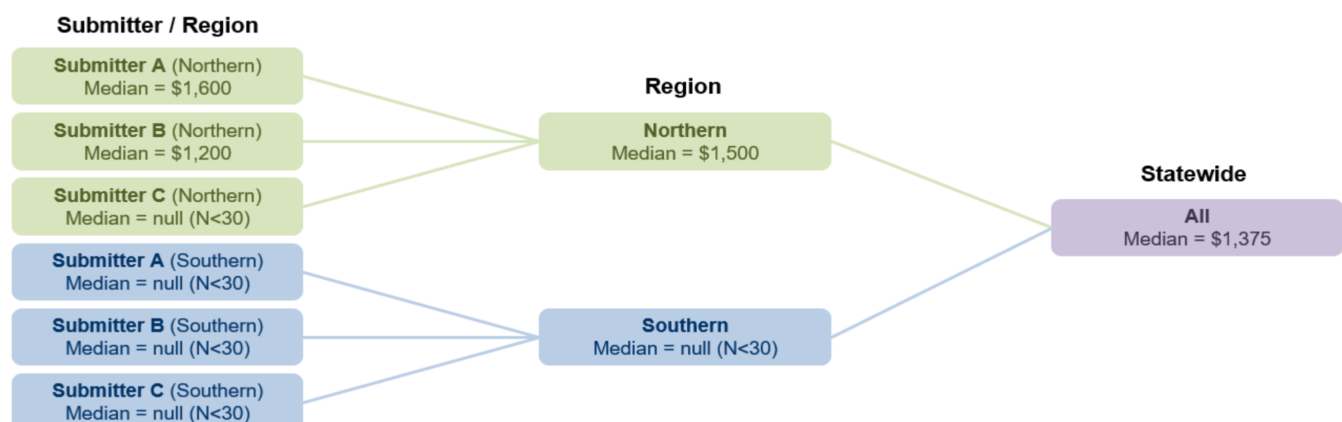
(Note: As part of this data quality assessment, Onpoint determined that data from Kaiser Permanente plans would not be included in the imputation pool and that FFS equivalents would not be imputed for any Kaiser services paid under capitation. Kaiser's unique organizational structure – they both provide health services through an extensive network of hospitals and pay for those services through their health plans – makes them an outlier within the California healthcare market.)

CREATING THE IMPUTED FEE SCHEDULE

To create the imputed fee schedule, Onpoint calculated a median amount at the most granular level possible for each submitter, including additional stratification based on geography. The approach was slightly different depending on payer type as detailed below.

Commercial & Medicare Advantage

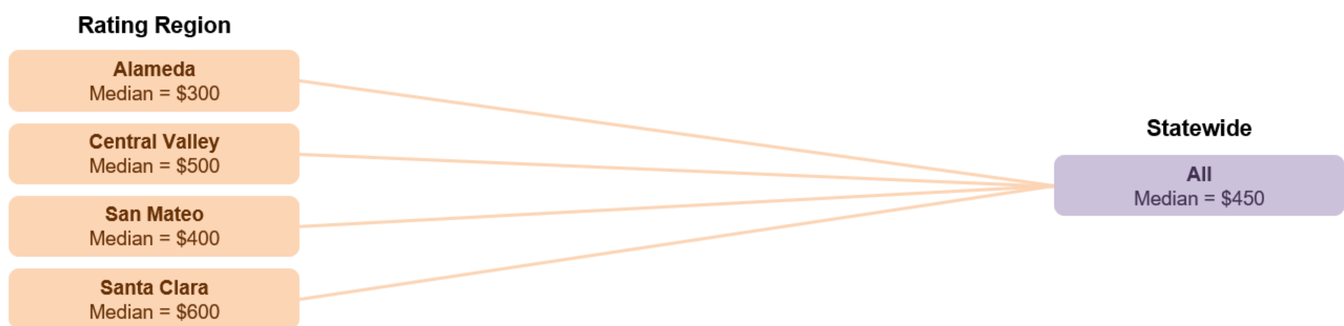
For commercial and Medicare Advantage plans, geographical stratification was performed at the regional levels of Northern and Southern California. To impute FFS equivalents, Onpoint examined a given service – a Current Procedural Terminology® (CPT) code for outpatient and professional services or a Medicare Severity Diagnosis Related Group (MS-DRG) for inpatient services – for each submitter and determined whether there were enough instances of that service (i.e., ≥30) in either the Northern or Southern region to calculate a median. If there was sufficient volume, the median was used as the FFS equivalent for that service, for that submitter, for that region. The figure below illustrates an example for the Northern region, with submitters A and B meeting the threshold and submitter C being removed due to low counts. In the Southern region, no submitter met the threshold.



If a submitter did not have at least 30 instances of a service in a region, Onpoint moved from the submitter level to the regional level. For example, if 30 or more instances of a given service existed in the Northern region across all Medicare Advantage plans, then the median paid amount for those services was used as the FFS equivalent. (The figure above illustrates that this threshold was met for the Northern region, but not the Southern region.) If 30 or more instances of a specific service could not be found across a payer type for a specific region, then the statewide median was used as the FFS equivalent. In the figure above, all three submitters for the Southern region would be assigned the statewide median as the FFS equivalent.

Medicaid

The approach was different for Medicaid (referred to as Medi-Cal in California), for which there is only one data submitter, the California Department of Health Care Services (DHCS). Instead of dividing the state into two regions, Onpoint calculated medians for each of the 19 Covered California rating regions – geographical designations that are used to set health insurance premiums based on local healthcare costs. If Medicaid did not meet the threshold of at least 30 instances of a given service in a specific rating region, the statewide median for that service was used as the FFS equivalent. This is illustrated in the figure below, which shows example median values for a subset of Covered California rating regions. In such cases, the median values would be used as the FFS equivalents in Onpoint's fee schedule, while rating regions that did not meet the threshold would use the statewide median.



ASSIGNING FLAGS

Once these FFS equivalents were calculated, they were added to the medical table in the HPD data sets. Imputed FFS equivalent amounts were provided for all possible service lines even if the FFS equivalent supplied by the submitter was determined to be of high quality. This provides both transparency and flexibility so HPD analysts can see how the imputed FFS equivalent compare to the value provided by the submitter and decide whether to use the submitter-supplied value or the imputed value in their analyses. As part of this work, Onpoint created a flag to help guide analysts' decisions, with a 'Y' indicating that the imputed FFS equivalent offered a valuable alternative to the reported FFS equivalent amount.

The table below shows example data for Current Procedural Terminology (CPT) code 99214 – an office or outpatient visit for an established patient lasting between 30 and 39 minutes – for several California health plans. The first two rows, in blue, illustrate two Medi-Cal submissions. One has been determined to be of high quality and use of the imputed value would not be recommended. (Note how the imputed value and the submitted value are quite close.) The example in the second row has an allowed amount of $0 and, therefore, would be flagged as low quality (since a positive allowed amount is required), and the use of the imputed FFS equivalent would be recommended. The next two rows from Plan A, shaded gray, have low-quality FFS equivalents. For both Plan A records, using the imputed FFS equivalent would be recommended. In the purple row, a commercial Plan B has high-quality FFS equivalents, and use of the imputed value would not be recommended. The green row illustrates data from Kaiser, where FFS

equivalents were not imputed for capitated services. In the final row, in orange, commercial Plan C submitted services paid under a fee-for-service arrangement for which imputation is unnecessary.

Service Setting	Payer Type	Submitter	Allowed Amount	Imputed FFS Equivalent Amount	Use Imputed FFS Equivalent Amount Flag?	Payment Type
Professional	Medicaid	Medi-Cal	$114	$100	N	Capitation
Professional	Medicaid	Medi-Cal	$0	$100	Y	Capitation
Professional	Commercial	Plan A	$0	$154	Y	Capitation
Professional	Commercial	Plan A	$30	$154	Y	Capitation
Professional	Commercial	Plan B	$210	$168	N	Capitation
Professional	Commercial	Kaiser	$230	N/A	N	Capitation
Professional	Commercial	Plan C	$195	N/A	N	FFS

CONCLUSION

Ensuring comparability across payment models is crucial to supporting meaningful cost reporting, particularly in states like California, where capitated payment arrangements are common. Creating an imputed fee schedule with geographical stratifications provided our client with a transparent benchmark for a wide range of common healthcare services paid under capitation. This fee schedule also can support crucial reporting, both public and internal, showing how the cost of healthcare services – both capitated and not – varies across regions and changes over time.

ABOUT THE AUTHOR

For questions or further information, please contact Onpoint's Health Data Analyst Nathaniel Ferguson at nferguson@onpointhealthdata.org.

ABOUT ONPOINT HEALTH DATA

Onpoint Health Data is a nonprofit organization that specializes in collecting, integrating, and analyzing health data to provide our clients with enriched data sets and innovative analytic solutions tailored to their specific needs. We are an independent, nonpartisan organization supporting federal, state, and regional health improvement initiatives for more than 50 years.

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