MILLIMAN WHITE PAPER

NADAC-plus: An emerging paradigm in pharmacy pricing?

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Due to drug price transparency concerns, *cost-plus* contracting is receiving greater attention. This paper discusses national average drug acquisition costs (NADAC) as a basis for *cost-plus* pricing.

With increased consumer and regulatory scrutiny on drug prices, stakeholders in the pharmacy supply chain are exploring drug pricing alternatives. The *cost-plus* pricing method establishes drug prices based on acquisition costs plus an explicit spread or fee. *NADAC-plus* pricing is a form of *cost-plus* pricing that relies on NADAC as a reference. This paper introduces NADAC and describes the opportunities and limitations of using NADAC as a basis for pharmacy pricing.

What is NADAC?

NADAC estimates the national average drug invoice price paid by independent and retail chain pharmacies. NADAC excludes specialty and mail order pharmacies, and does not reflect rebates, price concessions, or off-invoice discounts.

The Centers for Medicare and Medicaid Services (CMS) randomly surveys retail pharmacies to determine NADAC. Out of approximately 67,000 U.S. pharmacies, CMS selects 2,500 pharmacies per month and approximately 450–600 pharmacies voluntarily respond with actual drug price data.[1] Figure 1 highlights some common NADAC questions and answers.[2]

FIGURE 1: COMMON NADAC QUESTIONS & ANSWERS

QUESTION	ANSWER
What is NADAC?	National average drug acquisition cost for retail pharmacies.
Who contributes to NADAC?	Independent and retail chain pharmacies voluntarily contribute.
What is included / excluded?	Drug invoice prices are included. Rebates, price concessions, and off-invoice discounts are excluded. Specialty and mail order pharmacies are excluded.
How often is it published?	Random surveys are conducted monthly. NADAC datasets are updated weekly.
How is NADAC determined?	Average of voluntarily reported data by pharmacies. 450–600 pharmacies typically contribute per month.

How does NADAC compare to AWP?

In traditional pharmacy contracting, drug manufacturers set list prices, which affect drug price benchmarks like Average Wholesale Price (AWP) or Wholesale Acquisition Cost (WAC). Pharmacies purchase drugs from manufacturers and wholesalers at or below the list price and are typically reimbursed at a negotiated discount off AWP. Pharmacies and pharmacy benefit managers (PBMs) retain the difference between their acquisition cost and reimbursement amount as "spread income."

Alternatively, pharmacy contracting can rely on *NADAC-plus* pricing. *NADAC-plus* pricing establishes drug prices based on the drug-specific NADAC unit cost plus some fixed dollar spread or dispensing fee. This pricing approach aligns drug prices with average pharmacy drug costs rather than manufacturer list prices. Manufacturers may not have the same degree of drug pricing control with the *NADAC-plus* approach compared to discount off AWP pricing.

Figure 2 summarizes our estimates of NADAC equivalent discounts off AWP by drug type and line of business. Each discount reflects a weighted average based on typical drug utilization by drug type and business line. Please refer to the Methodology section for more information on our approach for developing the values in Figure 2.

FIGURE 2: NADAC EQUIVALENT DISCOUNTS OFF AWP (USING OCTOBER 2018 NADAC AND OCTOBER 2018 AWP)

DRUG TYPE	MEDICARE	COMMERCIAL	MEDICAID
Generic	92.6%	90.3%	90.2%
Brand	20.1%	20.0%	20.0%
Specialty	24.8%	24.2%	21.8%

[1] "CMS Retail Price Survey, NADAC Overview and Help Desk Operations." Centers for Medicaid and Medicare Services. August 2017. Retrieved on October 30, 2018, from https://www.medicaid.gov/medicaid/prescription-drugs/downloads/retail-price-survey/nadac-overview-operations.pdf.

[2] "National Average Drug Acquisition Cost (NADAC) Questions and Responses." Centers for Medicare and Medicaid Services. Retrieved on October 30, 2018, from https://www.medicaid.gov/medicaid-chip-program-information/by-topics/prescription-drugs/ful-nadac-downloads/nadacqa.pdf.

What opportunities exist with NADAC?

TRANSPARENCY

NADAC-plus pricing may increase transparency in the pharmacy supply chain by using a reference price that is closer to actual acquisition costs with a defined spread amount. NADAC is also publicly available and updated weekly. Increased transparency may help stakeholders better understand point-of-sale costs and simplify pharmacy sources of income.

Transparency in pharmacy pricing may also threaten competition by revealing confidential information. Pharmacy purchasing contracts are typically confidential and proprietary. Some stakeholders may prefer using *NADAC-plus* pricing over other *cost-plus* pricing methods due to the competitive implications of providing actual acquisition cost data.

MARKET SEGMENTS

NADAC provides state Medicaid programs with a drug price reference for outpatient pharmacy reimbursement. As of June 2018, 33 states and the District of Columbia rely on NADAC for Medicaid outpatient pharmacy reimbursement.[3] State Medicaid programs relying on NADAC use *NADAC-plus* pricing for their fee-for-service (FFS) delivery systems.

Although *NADAC-plus* pricing is currently less common for Medicare Part D and commercial insurance markets, it can be applied in these markets. NADAC rates may be higher than actual pharmacy acquisition costs, due to excluded items (e.g., off-invoice discounts) and a limited sample of pharmacies. However, dispensing fees will likely need to increase with *NADAC-plus* pricing in order to maintain current pharmacy reimbursement levels. Pricing levels are dependent on current rates and the specific mix of drugs within a given population.

INCENTIVES

Pharmacy spreads with *NADAC-plus* pricing may be set irrespective of drug list prices. Fixed dollar spreads could be equal for all drug types or higher for generic drugs to incent pharmacists to dispense less expensive generic alternatives. With this spread transparency, *NADAC-plus* pricing may help align incentives and emphasize clinical efficacy.

VOLUME

NADAC-plus pricing rewards efficiencies of scale and purchasing power similar to traditional pharmacy contracting. This volume-based incentive occurs as NADAC is a national average and pharmacies with sufficient volume could have acquisition costs lower than NADAC. Acquisition costs lower than NADAC could generate greater income for pharmacies with greater scale.

What limitations exist with NADAC?

VOLUNTARY REPORTING

Voluntary reporting introduces the potential for bias in *NADAC-plus* pricing. Each sample of pharmacies used to develop NADAC may not be representative of all 67,000 pharmacies in the United States. Pharmacies with lower drug acquisition costs may have an incentive not to report their data, as reporting may decrease their revenue. However, CMS notes the mean unit cost for brand and generic drug NADACs have an average margin of error of 0.5% and 2.4%, respectively, at a 95% confidence level.[2]

REPORTED DRUGS

The NADAC data set does not include all drugs. We estimate that reported drugs represent approximately 97% of Medicare utilization, 92% of commercial utilization, and 83% of ingredient cost in both markets in the October 10, 2018 NADAC data set. We also estimate NADAC reported drugs reflect 94% of Medicaid FFS utilization and 78% of Medicaid FFS reimbursement.

NADAC excludes mail and specialty pharmacy data. Additional drugs may be excluded due to a limited number of observations. CMS indicates that each reported NADAC reflects a minimum of five price observations.[2] The NADAC data set may also exclude certain National Drug Codes (NDCs) that reflect variations of a drug, such as manufacturer, strength, or package type.

REFERENCE BASIS

NADAC-plus pricing is a reference-based pricing approach, similar to using AWP. NADAC may not be equal to the actual acquisition cost for a given pharmacy due to key excluded items and has the potential to inflate over time, like AWP or WAC.

Stakeholders should carefully monitor excluded items (e.g., off-invoice discounts, rebates, and other price concessions) to ensure NADAC inflation is not intentionally caused by changes in pharmacy practices. Stakeholders should also monitor mail order or specialty pharmacy rates, especially if retail 90-day or retail specialty rates are equal to mail order and specialty rates.

MIX OF DRUG UTILIZATION

The financial impact of using *NADAC-plus* pricing will vary based on the mix of specific drug utilization. Figure 2 provides estimates of NADAC equivalent discounts off AWP using a standard distribution of drug use for each line of business. Actual performance will vary based on specific drug utilization.

[3] "Medicaid Covered Outpatient Prescription Drug Reimbursement Information by State." Centers for Medicare and Medicaid Services. June 2018. Retrieved on October 30, 2018, from: https://www.medicaid.gov/medicaid/prescription-drugs/state-prescription-drug-resources/drug-reimbursement-information/index.html.

Methodology

We estimated NADAC equivalent discounts in Figure 2 using publicly available NADAC data from October 10, 2018.[4] We compared NADAC to the most recent AWP as of October 2018 by NDC for each drug listed in the NADAC data. We then relied on average utilization distributions for the Medicare, commercial, and Medicaid populations to compute weighted average effective discounts. For commercial, we relied on utilization data by NDC from Milliman's Health Cost Guidelines™. For Medicare, we relied on utilization data by NDC from Milliman's 2017 Part D Consolidated Database. For Medicaid, we relied on utilization by NDC from CMS' 2017 State Drug Utilization Data. We relied on the brand and generic drug definitions from the NADAC dataset to aggregate the average discounts. We assumed a cost threshold of $670 per 30-day script to identify specialty drugs.

[4] "National Average Drug Acquisition Cost." Centers for Medicare and Medicaid Services. October 10, 2018. Retrieved on October 30, 2018, from https://www.medicaid.gov/medicaid/prescription-drugs/pharmacy-pricing/index.html.

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