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Market Forces in Medicare Reimbursement: Traditional Medicare, Medicare Advantage, and Provider Resource Constraints

Medicare reimbursement is regulated but remains shaped by health-care labor, capacity, productivity, and other market forces. These forces affect Traditional Medicare mainly through indexed input costs and utilization, while Medicare Advantage also responds through provider prices, plan costs, and bids.

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EXECUTIVE SUMMARY

Medicare reimbursement is administered, but it is not insulated from markets for provider labor, capital, facilities, and technology. Traditional Medicare payment formulas incorporate market-basket input prices, geographic wage indexes, case mix, and quality adjustments; total spending also depends on utilization. Medicare Advantage (MA) uses regulated bids and benchmarks. Provider negotiations affect plan costs and bids, which in turn affect federal payments.

Broad supply and demand shocks generally move provider input and payer-facing output prices in the same direction. The percentage changes may also be similar. Examples include workforce and training constraints, nursing shortages, insurance expansions, and immigration or workforce-entry rules.

Other policies create wedges that weaken this co-movement. A provider tax, considered alone, tends to raise the gross price paid by payers and lower the net price received by providers. Restrictive scope-of-practice, facility-entry, telehealth, and site-of-care rules can create a productivity wedge—effectively taxing production—by requiring more inputs per unit of output or preventing efficient input combinations. These restrictions can therefore raise payer-facing output prices relative to indexed input prices. Indexed input prices may even fall, reducing Traditional Medicare payment updates. Certificate of Need laws may also raise non-indexed scarcity returns to licensed capacity.

In practice, state provider taxes have often been paired with large supplemental Medicaid payments. Those payments increase demand for provider resources and tend to raise both input and output prices, so the combined effect may differ substantially from the tax alone.

The input-output distinction matters for federal spending. Traditional Medicare tracks market-basket input prices more closely, whereas MA plan costs respond more directly to provider output prices and utilization. Federal MA payments do not move one-for-one with plan costs because they depend on both bids and Traditional Medicare–based benchmarks. Broad supply or demand shocks thereby produce similar movements in commercial prices and Medicare reimbursement, whereas tax and regulatory wedges can produce materially different—and sometimes opposite—movements.

1. Introduction

Medicare reimbursement is administered and regulated, but it is not insulated from market forces. This paper explains how those forces enter Medicare reimbursement and what that means for the relationship between public policy and Medicare spending. To be clear, Medicare is not a conventional unregulated market. Traditional Medicare pays many providers through statutory and regulatory payment systems, and Medicare Advantage plans are paid under a federal bid, benchmark, quality, risk-adjustment, and rebate framework. The point is instead that Medicare's administered and regulated payments are embedded in ordinary markets for medical personnel, hospital capacity, post-acute capacity, supplies, capital, technology, and health plan production.

That distinction matters for policy analysis. A change in Medicare statute is not the only way to change Medicare spending. A policy that changes the supply of nurses, physicians, hospital beds, and other healthcare inputs can change Medicare costs even when no Medicare payment formula is amended. Traditional Medicare generally reflects those changes through input-price updates, service volume, site of care, coding, access, and payment-adequacy pressure. Medicare Advantage reflects the same changes through plan costs, provider networks, utilization controls, bids, rebates, premiums, and supplemental benefits.

A companion ASPE report estimates the effects of Medicaid provider taxes and state-directed payments on non-Medicaid prices and spending, and includes a short technical discussion of Medicare effects. This stand-alone paper provides the broader Medicare reimbursement framework. It treats Medicaid financing as one application of a more general question: how do policies that change provider costs, provider capacity, payer-facing output prices, or the relationship between payer-facing output prices and Medicare-indexed input prices affect Traditional Medicare, Medicare Advantage, federal Medicare spending, and beneficiaries?

Medicare payment is administratively determined but remains exposed to provider-market conditions. Traditional Medicare responds through indexed input-cost updates, geographic adjustments, utilization, coding, and service mix, while Medicare Advantage responds through plan costs, bids, and FFS-linked benchmarks. One-for-one co-movement between market prices and Medicare spending is a useful benchmark under fixed-wedge, factor-neutral assumptions, not a general result. Taxes, productivity changes, market power, and non-indexed scarcity can cause the two systems to respond differently.

The paper proceeds in that order. It first develops a price-theoretic framework distinguishing input prices, output prices, public-program demand shifts, provider taxes, and combined-policy cases. It then applies that framework separately to Traditional Medicare and Medicare Advantage, because administered prices, embedded input-price adjustments, MA bids, benchmarks, rebates, and plan production costs respond to market forces through different channels. The paper next examines ordinary market-force examples, including medical workforce supply, nursing and allied-health labor, scope-of-practice and licensure rules, facility capacity and Certificate of Need laws, telehealth, geographic market size, and site-of-care policy. After translating those examples into provider-allocation and plan-cost terms, the paper returns to Medicaid financing as a special case.

2. A Price-Theoretic Framework

Let Q denote provider output quantity, quality adjusted. Let P denote the payer-facing provider output price, inclusive of provider taxes. $p = (1 - t)P$ denotes the provider supply price, net of the ad valorem provider tax on gross revenue at rate t. Let *c* denote the composite of all provider factor (input) prices, regardless of how they are recognized in Medicare reimbursement rules. Although *p* is closer to *c* than *P* is, productivity Z_c results in a wedge between *c* and *p*:

$$Z_c = \frac{c}{p}.$$

Provider-market equilibrium is

$$Q = D(P; g, A_D), \qquad D_P < 0,$$
$$Q = S((1-t)PZ_c; g, A_r, A_w)Z_c, \qquad S_c > 0,$$

where

g = a vector of deviations of public-program reimbursement rates from commercial rates

A_D = a scalar representing other variables that shift out the demand for providers

A_w = a scalar representing other variables that shift out the effective supply of provider inputs whose prices are represented in the Medicare basket

A_r = a scalar representing other variables that shift out the effective supply of all other provider inputs.

For the purposes of tracking provider-market outcomes, the prices and quantities in our notation should be interpreted as adjusted for quality as market participants perceive it. Regulatory payment units are imperfect proxies for the market-valued bundle of provider services. The market-value perspective is also how national accountants approach the measurement of a wide swath of industries.

Regulators often measure quantities and administratively fix public-program payments based on number of patients or procedures, with various statutory and regulatory adjustments for region, diagnoses, patient survey responses, etc. To the extent that the administrative rates deviate from market rates, competition moves to other margins. For example, providers may upcode Medicare and Medicaid patients, or invest less in their business lines and locations that have relatively few commercial payers. In other words, commercial and public payments per unit provider input are more similar than payments per medical procedure. The former matters most in the market for providers, and will be more closely related to provider time, effort, and materials. The latter is relevant for tracking fiscal outcomes.

Holding constant the tax rate t and the neutral productivity term Z_c, output prices and composite-input prices move together because both reflect the scarcity of provider resources. If nurses, physicians, hospital beds, operating rooms, or post-acute slots become scarcer, provider input prices rise, as do the output prices p and P. All three of P, p, and c would change by the same percentage.

This is not to say that provider-market outcomes track the outcomes of an unregulated market. First, t drives a tax wedge between the price paid by payers and received by providers. Second, g may shift market demand or supply. Especially, supply may be reduced at each p the more that public payment rates differ from market rates. Regardless, the effects of A_D, A_w, A_r, and Z_c variables can be decomposed into an effect holding g constant plus an additional effect working through g. This report focuses on the former, but includes discussion of the g effects.

For example, an increase in medical workforce supply, nursing capacity, facility capacity, or productivity shifts effective supply outward. In our notation, that is an increase in A_w, A_r, or Z_c. Holding fixed t, Z_c, and g, the equilibrium response is

$$\frac{d\ln P}{dA_r} = \frac{d\ln p}{dA_r} = \frac{d\ln c}{dA_r} < 0, \qquad \frac{d\ln Q}{dA_r} > 0.$$

$$\frac{d\ln P}{dA_w} = \frac{d\ln p}{dA_w} = \frac{d\ln c}{dA_w} < 0, \qquad \frac{d\ln Q}{dA_w} > 0.$$

An outward demand shift, such as population aging, increased insurance coverage, or greater demand for a class of medical services, raises the equilibrium scarcity value of provider resources. Holding t and g fixed,

$$\frac{d\ln P}{dA_D} = \frac{d\ln p}{dA_D} = \frac{d\ln c}{dA_D} > 0, \qquad \frac{d\ln Q}{dA_D} > 0.$$

In both cases, the payer-facing output price P, the provider supply price p, and the input composite price c change in the same direction and by the same percentage because the tax wedge is held constant.

An increase in Z_c also shifts provider output supply outward, lowering $P$and increasing Q. Unlike an $A_w$or A_r shift, however, it directly changes the relationship between output and input prices. The directional effect on c, w, and r depends on whether provider demand is price inelastic or price elastic.

2.1 Tracking multiple input prices

We refer to the owners of inputs broadly to include the owners (and, in the case of non-profits, donors and other stakeholders) of the provider business. This broad interpretation is why we often refer to two categories of inputs, only one of which has its prices included in the Medicare market basket. Let

w = the composite price of those provider inputs that are part of Medicare rate setting

r = the composite price of all other provider inputs

r includes non-Medicare-indexed input prices and residual returns to fixed or scarce provider factors, including certain types of capital, land, organizational assets, regulatory permissions, reputation, and quasi-rents. Changes in provider market power can therefore be represented, in reduced form, as changes in the shadow price of scarce fixed factors or quasi-rents included in r. Under this broad economic interpretation, all provider revenue is paid to some input owner, including workers, suppliers, creditors, capital owners, land owners, residual claimants, or nonprofit stakeholders.

In logs, the change in the composite *c* is the factor-share weighted average of the change in input prices.

$$d\ln c = \theta_w d\ln w + (1-\theta_w) d\ln r$$

Note that the wedge, if any, between the composite price and the Medicare input-price index is:

$$d\ln c - d\ln w = (1-\theta_w) d\ln \frac{r}{w}.$$

We can now specify the three contributors to the gap between the payer price *P* and the Medicare input-price index *w*:

$$d\ln P - d\ln w = -d\ln(1-t) - d\ln Z_c + (1-\theta_w) d\ln \frac{r}{w}.$$

The first two are the provider tax and productivity, respectively. The final is close to zero to the extent that the spending share of the inputs excluded from the Medicare index is small, the elasticities of supply do not differ substantially between the two inputs, or the two inputs are poor substitutes in production.

Holding constant Z_c, the supply price changes only because one or both input prices change. Any of the shocks A_D, Z_c, and t move w and r in the same direction, along their respective input supply curves. With homothetic

provider production and at fixed relative input prices, an increase in quality-adjusted provider output raises demand for both input composites proportionately. Therefore, for a broad, factor-neutral demand or capacity shock, relative movements in w and r are governed by the relative elasticities of input supply. Especially, if the two input composites are equally elastically supplied, r, w and c all have the same percentage change. If instead the r inputs are more elastically supplied than the w inputs, then the magnitude of the percentage change in w exceeds the percentage change in r and cZ_c. The third possibility is that w is more elastically supplied and therefore has a lesser percentage change than the other two. Given that the w inputs are intensive in trained medical personnel, which are not readily supplied at a national level over time frames of less than a decade, we focus on the first two cases $|d\ln w| \geq |d\ln c| \geq |d\ln r|$.

2.2 Public-program demand shifts

State-directed Medicaid payments and other public-program changes are close to the ordinary demand-shift case. Expanded eligibility for public health insurance increases the demand for provider resources from that payer category. If provider resources are not perfectly elastic, the increased demand raises the scarcity value of provider capacity and can reduce the residual supply available to other payers. That is the A_D demand shift from above.

2.3 Provider taxes and combined-policy cases

Provider revenue taxes do not change the relationship between the input-price composite c and the provider supply price p, but they do drive a wedge between supply and demand prices in the provider market.

$$\frac{d\ln P}{dt} > \frac{d\ln p}{dt} = \frac{d\ln c}{dt}, \qquad \frac{d\ln Q}{dt} < 0.$$

With the caveat cited in Section 2.1, the input prices *r* and *w* are expected to move with the input-price composite *c*.

Provider taxes levied by states have been closely linked to state-directed payments (SDPs) to Medicaid providers. The Working Families Tax Cut Act addresses both. We handle that theoretically by combining the two effects. If the SDP amounts are enough relative to provider tax amounts, then increasing them at the same time would increase both demand and supply prices in output markets, although the supply price p and input prices *r* and *w* by lesser percentages.

3. Traditional Medicare Reimbursement: Administered Prices Linked to Input Markets

3.1 Administered Output Prices

Provider payments on behalf of Medicare members differ between traditional Medicare (to a first approximation, fee for service, FFS) and Medicare Advantage (MA). They are also different for prescription drugs, which are not analyzed in this document.

Traditional Medicare FFS is the least market-like Medicare payment channel at the point of service. It uses prospective payment systems, which are methods of reimbursement where Medicare pays a predetermined, fixed amount for a defined unit of service, based on its classification, regardless of the provider's actual cost for that case. The fixed amounts are set by statute and regulation. However, these administrative formulas incorporate market-based input prices, geographic labor costs, case mix, technology, quality, and access considerations.

3.2 Embedded Market Input Prices

Take inpatient hospital care. The Inpatient Prospective Payment System (IPPS) pays based on diagnosis-related groups, a national base rate, geographic labor-cost adjustment, case mix, and additional policy adjustments. Outpatient hospital payment under Outpatient Prospective Payment System (OPPS) is analogous in that it uses prospectively determined payments, wage adjustments, and annual updates. OPPS pays at the level of Ambulatory Payment Classifications (APCs), where each outpatient service or procedure maps to an APC rather than being bundled into a single stay-level payment.[1] Similarly, home health, skilled nursing facility (SNF), and hospice care each operate under their own prospective payment systems, where a predetermined rate per episode is paid, per diem, or per level of care rather than reimbursing individual services rendered. As with IPPS and OPPS, these rates are set administratively, updated by sector-specific market basket indices, and adjusted for case mix and other policy factors.

A stylized FFS payment formula for service type i rendered in location l during year y is

$$R_y \cdot CW_i \cdot G_{\ell y} \cdot J_{i\ell y},$$

where

R_y = national base rate or conversion factor in year y

CW_i = case weight or service weight

$G_{\ell y}$ = geographic wage or practice-cost adjustment for area ℓ

$J_{i\ell y}$ = other adjustments, including teaching, DSH, new technology, quality, outlier, budget-neutrality, or statutory adjustments

The base rate update can be represented as

$$R_{y+1} = R_y\left[1 + MB_y + \epsilon_y\right],$$

where

MB_y = market-basket update

ϵ_y = various statutory and regulatory policy adjustments

The ϵ_y term has historically been negative at about −1%. This means that the elasticity of R_{y+1} with respect to MB_y is slightly greater than, but well approximated by, one.

In the notation of Section 2, the market basket is the principal way that w enters traditional Medicare reimbursement. The market basket is an input-price index for provider costs, with categories such as wages and salaries, employee benefits, medical supplies, pharmaceuticals, utilities, purchased services, capital-related costs, and professional liability insurance. CMS constructs the market basket and applies it in Medicare rate setting, but most of the component price measures are produced by the Bureau of Labor Statistics. The index formula is homogeneous of degree one in the input prices, which means that, in logarithms, the change in the index is the cost-weighted sum of the changes in the component input prices. For example, a ten

[1] Centers for Medicare & Medicaid Services, "Medicare Payment Systems," Medicare Learning Network, accessed June 2026. https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/html/medicare-payment-systems.html

percent increase in all input prices would increase the index by ten percent and thereby increase Medicare payment rates by ten percent plus any changes in case weights, geographic weights, and other adjustments.[2]

3.3 Key Differences between Medicare Rates and Market Prices

In this way, traditional Medicare reimbursement rates move with the indexed input prices represented by w. This does not make traditional Medicare rates market prices. Their levels are set administratively. More importantly for the present analysis, the market-basket update tracks only the $w$component of provider cost, whereas payer-facing output prices can also reflect taxes, productivity, and the prices or scarcity returns of inputs not represented in the market basket.

Recall the Section 2 cost identity

$$d\ln P - d\ln w = -d\ln(1-t) - d\ln Z_c + (1-\theta_w)d\ln\frac{r}{w}.$$

A reduction in Z_c raises the inputs required per unit of provider output even if the prices of those inputs do not rise. Restrictive scope-of-practice, licensure, telehealth, and some site-of-care rules can operate through this productivity term. Certificate of Need and other facility-entry restrictions can operate through the $r$term, the Z_c term, or both.

For a broad, factor-neutral supply or demand shock, t and Z_c are fixed and $r$and w may move by similar percentages. In that benchmark case, payer-facing output prices and indexed input prices also move by similar percentages. Tax and regulatory wedges break that result. They can cause P to rise more than w, while w may rise less, remain approximately unchanged, or fall.

Even when a shock operates through w, the response of a particular traditional Medicare payment need not equal the market-basket response. Providers and service lines may use inputs in proportions that differ from the fixed weights in the applicable market basket. In addition, the payment formula contains the geographic adjustment G_{ly}, the case or service weight CW_i, and the other adjustments J_{ily}. Total traditional Medicare spending also depends on utilization and site of care. Thus, the market-basket component of the base-rate update may track w closely even when the full payment per claim or total traditional Medicare spending responds differently.

3.4 Medicare rates and Medicare spending

Traditional Medicare spending in year y is the sum of the rates $R_y CW_i G_y J_{iy}$ across all reimbursed claims. The number of claims (utilization) can respond to the rates themselves. On the demand side, patients have copays that are related to the reimbursement rates and may respond to higher copays by opting for less utilization. On the supply side, providers may encourage patients to opt for services that have more profitable reimbursements. To the extent that providers have discretion as to the service category assigned to a particular patient, they may bill for a higher-severity diagnosis or service classification. This final effect is known as “upcoding,” which payers seek to control but their incentives to control upcoding differ between traditional Medicare (CMS is the payer), Medicare Advantage, and commercial plans. Providers may also opt out of Medicare in various ways.

[2] IPPS and OPPS are two of several Medicare payment systems. Another is the Medicare Physician Fee Schedule (PFS), which has a related administered-pricing structure. The PFS does not use the same formula as IPPS, but it has analogous elements: a conversion factor (*R*), relative value units for service resources (*CW*), geographic practice cost indexes (*G*), and other payment adjustments (*J*). PFS budget-neutrality rules can affect the conversion factor when changes in relative values would otherwise change aggregate spending. The historical “doc fix” episodes are best understood as legislative interventions in the PFS conversion factor/update mechanism.

4. Medicare Advantage: Bids, Benchmarks, Rebates, and Plan Production Costs

Federal spending on Medicare Advantage reflects a regulated bid-and-benchmark system. A plan submits a bid estimating the cost of furnishing Medicare Part A and Part B benefits for an average-risk enrollee. The bid is compared with a benchmark, which is tied to traditional Medicare spending in the plan's service area and adjusted under statutory rules. Plans that bid below the benchmark receive a base payment equal to the bid plus a rebate equal to a share of the bid-benchmark difference. Plans that bid above the benchmark receive the benchmark, and enrollees pay the difference as a supplemental premium.[3]

4.1 Notation

F = federal payment to an MA plan per enrollee, before risk adjustment

B = plan bid for an average-risk beneficiary

E = expected plan cost of furnishing Part A and Part B benefits for an average-risk beneficiary

H = MA benchmark

T = traditional Medicare spending per enrollee or the county FFS rate used in benchmark construction

ρ = rebate percentage

η_{FFS}^{T} = elasticity of traditional Medicare spending, and therefore the FFS-linked benchmark component, with respect to the national base rate in traditional Medicare

4.2 Benchmark determination

Benchmarks vary by county and quality rating. For present purposes, write

$$H = \kappa T,$$

where κ summarizes county benchmark rules, quality bonuses, and other benchmark adjustments. Holding κ constant,

$$\frac{d\ln H}{d\ln T} = 1.$$

If market force x changes traditional Medicare rates, then

$$\frac{d\ln H}{dx} = \eta_{FFS}^{T} \frac{d\ln R_y}{dx}.$$

4.3 Bidding below the benchmark

For plans bidding below the benchmark, the standard rebate percentages are

$$\rho = \begin{cases} 0.70, & \text{if the contract's star rating is at least } 4.5 \\ 0.65, & \text{if the contract's star rating is at least } 3.5 \text{ but less than } 4.5 \\ 0.50, & \text{if the contract's star rating is less than } 3.5. \end{cases}$$

Plans that bid below the benchmark receive a base payment equal to the bid plus a rebate equal to a share of the bid-benchmark difference. Federal payment before risk adjustment is therefore a weighted average of the MA benchmark *H* and the plan bid *B*.

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[3] KFF, "How Medicare Pays Medicare Advantage Plans: Issues and Policy Options," December 2025. https://www.kff.org/medicare/how-medicare-pays-medicare-advantage-plans-issues-and-policy-options/

$$F = B + \rho(H - B) = \rho H + (1 - \rho)B,$$

where the rebate amount is $\rho(H - B)$.

When $0 < \rho < 1$ and $B < H$, the federal payment is between the bid and the benchmark:

$$B < F < H.$$

Rebate dollars must be used for beneficiary value through lower cost sharing, reduced premiums, Part B or Part D premium reductions, or supplemental benefits, subject to MA rules. In practice, supplemental benefits and premiums are major plan choice margins. In 2026, KFF reports that three-quarters of enrollees in individual MA-PD plans are in plans with no premium other than the Part B premium, most MA enrollees are in plans with dental, vision, and hearing benefits, about one-third are in plans with Part B premium rebates, and nearly all are in plans requiring prior authorization for some services.[4]

4.4 Bid response to plan costs

An MA plan's cost of furnishing the Medicare benefit package is not simply the price of provider services. It also depends on site of care, network design, care management, the administrative cost of arranging access and, especially, utilization.

Therefore, negotiated rates are not the only way that provider-market forces affect plan costs. A reduction in market supply or an increase in demand may increase utilization as plans relax utilization controls, accept broader or higher-cost networks, lose the ability to steer patients to lower-cost settings as they seek to attract and retain providers. This could appear as an increase in plan cost per member with little increase in rates negotiated at the service level.

MA bids are required to reflect expected plan costs for Medicare-covered Part A and Part B benefits. Let

$$B = B(E), \qquad B' \approx 1.$$

The approximation $B' \approx 1$ is a marginal assumption. It does not require that bid levels equal realized claims exactly, only that a broad market-wide change in the cost of producing the Medicare benefit package changes allowable bids approximately one-for-one.

For a market-wide cost change dE,

$$\frac{dF}{dE} = \rho \frac{dH}{dE} + (1 - \rho) \frac{dB}{dE}.$$

Using $dB/dE \approx 1$,

$$\frac{dF}{dE} \approx \rho \frac{dH}{dE} + (1 - \rho).$$

4.5 Bidding above the benchmark

For plans bidding above the benchmark, *F* = *H*. A market-wide cost change would affect these federal payments only through the benchmark.

Interestingly, it is rare for plans to bid above, or even near, the benchmark even though the plan's federal payment increases with its bid all the way up to the benchmark. The economic inference is that plans perceive

[4] KFF, "Medicare Advantage in 2026: Premiums, Out-of-Pocket Limits, Supplemental Benefits, and Prior Authorization," June 2026. https://www.kff.org/medicare/medicare-advantage-in-2026-premiums-out-of-pocket-limits-supplemental-benefits-and-prior-authorization/

a cost – especially, adverse enforcement actions – for submitting a bid that is too far beyond their expected costs of furnishing Medicare Part A and Part B benefits. We assume that the gap between bid and expected plan costs is essentially zero and is not meaningfully affected by market conditions.

4.6 Elasticity of federal MA spending

Given that essentially all MA plans are below-benchmark plans, we can describe all of MA with

$$F = \rho H + (1 - \rho)B.$$

Taking log differentials with respect to a market force x gives

$$\frac{d\ln F}{dx} = \lambda \frac{d\ln H}{dx} + (1 - \lambda)\frac{d\ln B}{d\ln E}\frac{d\ln E}{dx}.$$

where $\lambda = \frac{\rho H}{F}$.

With bids at plan costs, $\frac{d\ln B}{d\ln E} = 1$. We already showed that the benchmark satisfies $\frac{d\ln H}{dx} = \eta_{FFS}^{T}\frac{d\ln R}{dx}$. Therefore

$$\frac{d\ln F}{dx} = \lambda\eta_{FFS}^{T}\frac{d\ln R}{dx} + (1 - \lambda)\frac{d\ln E}{dx}.$$

This equation is the main MA transmission result. Federal MA payments are a weighted average of an input price (R) component and a bid-linked plan-cost component. For market forces that move input and output prices proportionally and do not affect FFS utilization rates $\eta_{FFS}^{T} = 1$, their effect on MA payment rates is also proportional. For a provider-tax shock by itself, the effect is far less than proportional because the weighted average above is the sum of a negative term and a positive term.

5. Market Forces That Affect Medicare

The following examples illustrate various market forces that affect Medicare even when Medicare payment statutes are unchanged. Broad supply and demand shocks generally move output prices and indexed input prices together. Productivity increases reduce payer-facing prices without necessarily increasing input prices. Other policies shift the supplies of provider inputs, potentially changing input prices differently from output prices.

5.1 Clinician workforce supply

The effective supply of clinical services depends on the number of clinicians available, their distribution across occupations and geographic areas, and the range of services each type of clinician is permitted to furnish. Constraints on any of these margins can raise the scarcity value of clinician time and limit available clinical capacity. Relevant constraints include medical-school seats, residency slots, other clinical-training capacity, nursing faculty, immigration rules, retirement, burnout, licensure requirements, and scope-of-practice rules.

Physician supply is constrained at the point of entry into training. Undergraduate medical education is governed by the Liaison Committee on Medical Education (LCME), the sole accreditor of MD programs and the only accreditor recognized by the U.S. Department of Education for that purpose. The moratorium of 1980–2005 instituted by the Association of American Medical Colleges (AAMC) and the American Medical Association (AMA) froze MD graduates at about 16,000 per year for a quarter-century. In the framework of Section 2, these capacity constraints act through the effective-supply shifters A_w and A_r: they raise the scarcity value of clinician time, keep provider output prices high relative to what they would be with a more responsive supply, and limit the quantity of clinical services available to Medicare and other payers.

Nursing and allied-health supply is important for hospitals, skilled nursing facilities, home health agencies, and other labor-intensive providers. Shortages in these occupations can raise labor costs, constrain staffed capacity, and shift care toward more expensive settings or staffing arrangements. HRSA's workforce projections identify projected shortages across multiple health occupations, including physicians, registered nurses, licensed practical nurses, and other clinical personnel, with nonmetro areas often projected to experience larger shortages.

In the notation of Section 2, changes in clinician headcount, workforce composition, and legally permitted task allocation all operate through the effective-supply shifters A_w and A_r. An expansion in effective workforce supply tends to reduce the scarcity value of clinical labor and provider-market prices for affected services (w in Section-2 notation) while increasing quantity. The effects need not be uniform across occupations or services, particularly when a policy changes the allocation of tasks among clinicians. The non-indexed input price r may well move in the opposite direction, while the composite input price c – and therefore the output prices p and P – change by a lesser percentage.

Traditional Medicare transmits workforce conditions differently across payment systems. Institutional payment systems reflect labor costs through sector-specific market baskets and geographic wage indexes, while practitioner services are paid under the Physician Fee Schedule, which has its own resource and geographic adjustments. Across payment systems, workforce scarcity can also affect access, utilization, provider mix, site of care, and payment-adequacy pressure. Medicare Advantage experiences the same workforce conditions through provider availability and negotiated prices, network formation, plan care models, utilization management, plan production costs, and bids.

5.2 Facility capacity and Certificate of Need laws

Facility-entry rules affect the supply of hospital, ambulatory, imaging, nursing facility, and other capital-intensive care. Certificate of Need laws require approval before certain capital expenditures, new facilities, or service expansions. NCSL reports that 35 states and Washington, D.C. operated CON programs as of January 2025, with wide variation across states.[5]

Facility-entry restrictions are distinctive because they may operate primarily through production factors whose prices are not included in Medicare market baskets, such as capital, land, or organizational assets. Their scarcity value is part of r in the notation of Section 2, which expressed the log output price as a weighted average of the log w and log r, minus a productivity term. Consequently, r and provider output prices may rise substantially even while w may fall with the reduced demand for output. Even if w rises, it would be less in percentage terms than r and p do.

Because they are linked to input prices, Traditional Medicare FFS payment rates do not keep up with output prices. Overall Medicare payment rates would fall if the downward pressure on w is enough to offset the higher MA bids.

5.3 Scope of clinical practice and market reach

The effective capacity of the clinical workforce depends not only on clinician headcount but also on the set of tasks, patients, locations, and delivery modes available to each clinician. Occupational scope-of-practice rules determine which services clinicians with different training and credentials may furnish. Licensure and

[5] National Conference of State Legislatures, "Certificate of Need State Laws," updated April 29, 2025. https://www.ncsl.org/health/certificate-of-need-state-laws/maptype/tile

telehealth rules determine the geographic markets and delivery modes through which those services may be furnished. These policies therefore restrict or expand the feasible deployment of the existing workforce.

Laws that permit nurse practitioners, physician assistants, pharmacists, psychologists, and other clinicians to practice to the extent of their training and licensure can improve task allocation among clinician types. Similarly, interstate licensure portability and permission to furnish suitable services remotely can allow existing clinicians to serve patients outside their immediate geographic markets and reduce local bottlenecks. In both cases, liberalization can expand effective clinical capacity without increasing clinician headcount. FTC staff has cautioned that unnecessary restrictions on advanced practice registered nurses can reduce competition and deprive consumers of the benefits of vigorous competition.[6]

Telehealth rules apply the same principle along geographic and delivery-mode margins. By allowing patients and clinicians to interact remotely, telehealth can increase effective supply, reduce travel costs, and weaken local bottlenecks for services that can be delivered remotely. Current federal policy extends many Medicare telehealth flexibilities through December 31, 2027, including home-based non-behavioral telehealth without geographic restrictions, while some behavioral-health telehealth flexibilities are permanent.[7]

In the notation of Section 2, these reforms can be represented as an increase in Z_c. The reforms enlarge the set of feasible clinician-patient-service combinations and reduce labor cost per unit of care even if compensation for some affected clinicians rises. Although Z_c reduces provider-market output prices, it would not reduce a fixed-weight input-price index as much, if at all. This is one reason why many Traditional Medicare payment systems include a separate productivity adjustment in their annual payment updates, although that adjustment is based on economy-wide productivity rather than evolving provider-market conditions.

Patient travel time is an important factor in the telehealth calculus. From an economic perspective, patient time is just an example of a health-production input. However, its value is not part of Medicare reimbursement formulas. Indeed, telehealth changes that induce substitution away from patient time and toward inputs that are in the formula could increase reimbursement rates in both MA and Traditional Medicare. This is a potentially important difference between telehealth and the other market-reach policies that affect productivity.

6. Applying the Framework to Market Forces

The table below summarizes how several non-Medicaid market forces enter Medicare.

[6] Federal Trade Commission, Office of Policy Planning, Policy Perspectives: Competition and the Regulation of Advanced Practice Nurses (March 2014).

[7] Telehealth.HHS.gov, “Medicare Payment Policies,” last updated February 5, 2026. https://telehealth.hhs.gov/providers/billing-and-reimbursement/medicare-payment-policies

Table 1. Transmission of market forces to Medicare reimbursement

Mechanism	Illustrative policies	Economic mechanism	Relationship among P, p, c, w, r, and Z_c
Broad provider supply expansion	Physician workforce, residency slots, nursing supply, immigration, workforce entry	Expands effective provider supply without changing the tax wedge or production technology.	**Benchmark case.** Holding the tax wedge and productivity fixed, P, p, and the composite input price c move in the same direction. To the extent that the factors with supply changes are also indexed, the indexed input price w tends to change by a greater percentage than P, p, and c.
Broad provider demand expansion	Population aging, insurance expansion, epidemics, SDPs (considered alone)	Increases demand for provider resources.	**Benchmark case.** P, p, and c move in the same direction. w and r generally do so as well, but their percentage changes can differ to the extent that the two input categories may have different supply elasticities.
Productivity wedge	Scope of practice, licensure reform, team-based care	Raises or lowers Z_c by changing the feasible combination of inputs required to produce care.	A productivity improvement raises Z_c and lowers P and p relative to indexed input prices; a restrictive rule lowers Z_c and raises P and p relative to w.
Market-reach wedge	Telehealth, interstate licensure portability	Expands geographic markets and feasible clinician-patient matches; effectively increases Z_c.	Output prices may fall relative to w, while utilization may rise. There is no fixed proportional relationship. If telehealth substitutes away from unpriced patient travel time toward inputs included in Medicare formulas, reimbursement can instead rise.
Non-indexed scarcity wedge	CON laws, facility-entry restrictions, bed limits	Changes the scarcity value of non-indexed factors captured by r.	r and output prices may change much more than w, which may even move in the opposite direction if restricted capacity reduces output and therefore demand for indexed inputs.
Provider-tax wedge	Provider taxes, gross-receipts assessments	Creates a wedge between payer price and net provider price.	P rises relative to p. The indexed input-price composite w responds to the underlying demand for provider resources, not mechanically to the tax-inflated payer price. This is distinct from productivity and scarcity wedges.
Combined tax and demand policy	Provider tax plus SDP	Superimposes a demand shift on the tax wedge.	The net effect depends on the relative sizes of the demand and tax components. P, p, c, and w would not move proportionally.

The mechanisms above affect Traditional Medicare and Medicare Advantage through different institutional channels. Traditional Medicare uses administered payment rates linked primarily to market-basket input prices, geographic labor costs, case mix, and statutory or regulatory adjustments. Provider-market shocks can therefore affect payment updates, but the response may be delayed or incomplete. The full effect on spending also depends on utilization, coding, access, provider mix, and site of care. Productivity changes, non-indexed scarcity rents, and provider-tax wedges are not captured one-for-one by the market basket.

Medicare Advantage plans experience provider-market shocks through negotiated prices, network formation, utilization management, site-of-care choices, and plan production costs. Changes in plan costs affect bids, while federal payments also depend on the Traditional Medicare-based benchmark and rebate rules. A reduction in plan costs may therefore reduce bids and federal payments, increase rebate-financed beneficiary value, or change premiums, cost sharing, supplemental benefits, and networks. Conversely, provider scarcity can raise plan costs even when the Traditional Medicare market-basket channel moves less.

The distinction is especially important for wedge cases. A productivity or market-reach improvement may lower MA plan costs without proportionately lowering indexed Traditional Medicare payment rates. A CON restriction may raise MA negotiated prices and network costs through non-indexed scarcity while affecting Traditional Medicare primarily through access, site of care, and payment-adequacy pressure. A provider tax has limited direct effect on the Traditional Medicare market basket but can more directly affect payer-facing prices and MA plan costs. When a provider tax is combined with an SDP, the two channels must be analyzed together rather than treated as a single ordinary supply or demand shock.

7. Medicaid Financing as a Special Application

The Medicaid policy application in the companion report includes two mechanisms: state-directed payments and provider taxes.

State-directed payments are close to the ordinary demand-shock model. They raise Medicaid compensation for provider resources. If provider supply is not perfectly elastic, Medicaid demand absorbs some provider capacity that would otherwise be available to Medicare, commercial insurance, Marketplace coverage, or self-pay patients. Residual supply to non-Medicaid payers shifts left, raising non-Medicaid output prices and provider input prices.

Provider taxes are different. They create a tax wedge:

$$P = \frac{p}{1 - \mathrm{t}}.$$

A tax increase raises the payer-facing output price P but lowers the net supply price p received by providers, with incidence governed by supply and demand elasticities:

$$\frac{dP}{dt} = \pi, \qquad \frac{dp}{dt} = -(1 - \pi).$$

The companion notes emphasize this distinction: SDPs tend to move commercial output prices and CMS input-price indexes in the same direction, while provider taxes affect the ratio of the CMS input-price index to commercial prices because taxes are not themselves included in the CMS input-price index.[8]

The Working Families Tax Cut provisions reduce both provider taxes and SDPs. The two changes have different effects on provider input prices. Reducing SDPs lowers Medicaid demand for provider resources and therefore lowers both input and output prices. Reducing provider taxes lowers payer-facing output prices but, by itself, can increase provider net supply prices by removing the tax wedge. In the calibration used in the companion report, the SDP effect dominates because the dollar value of SDP changes is larger. The net effect is that provider input prices move in the same direction as output prices, but by less.

Let p denote the non-Medicaid output price and w denote the input-price composite relevant to traditional Medicare. For the WFTC provider-tax-and-SDP shock,

$$h_{WFTC} \equiv \frac{d\ln w}{d\ln p} \approx 0.30.$$

This is not a universal Medicare elasticity. It is a composite elasticity for this specific policy shock, which combines an ordinary demand/capacity effect with a provider-tax wedge effect.

Additional Medicaid revenue may relax hospital fiscal constraints and thereby affect staffing, capacity, service availability, service mix, coding, and utilization. As the additional revenue expands effective capacity or weakens pressure to limit service volume or intensity, hospitals may furnish more reimbursable services to Medicare beneficiaries. In Traditional Medicare, additional covered discharges, visits, procedures, or other payment units increase aggregate spending at prevailing administered rates. For Medicare Advantage, higher utilization by MA enrollees raises plan costs and thereby plan bids. To the extent that utilization also rises in Traditional Medicare, higher FFS spending per beneficiary may subsequently raise MA benchmarks. This would be a utilization effect on Medicare spending beyond the *w* effect already noted.

[8] Author notes supplied for this drafting exercise, "Notes on costs and Medicare payments," June 2026.

8. Federal Medicare Spending Elasticities

The co-movements, or lack thereof, of non-drug Medicare spending and commercial prices P in response to a policy change can be expressed as an elasticity.

Let

ω_T = share of non-drug Medicare spending in traditional Medicare

η_x^T = traditional non-drug Medicare spending or benchmark elasticity with respect to the output-price effect of market force x

λ_H = benchmark-linked share of non-drug MA federal payments

ε_x^B = bid elasticity with respect to the output-price effect of market force x

The federal MA payment elasticity is

$$\varepsilon_x^{MA} = \lambda_H \eta_x^T + (1 - \lambda_H)\varepsilon_x^B.$$

The overall federal Medicare elasticity is

$$\varepsilon_x^{Medicare} = \omega_T \eta_x^T + (1 - \omega_T)[\lambda_H \eta_x^T + (1 - \lambda_H)\varepsilon_x^B].$$

For ordinary market forces that move input and output prices together, η_x^T and ε_x^B may both be near one over a sufficiently long horizon:

$$\eta_x^T \approx 1, \qquad \varepsilon_x^B \approx 1, \qquad \Rightarrow \qquad \varepsilon_x^{Medicare} \approx 1.$$

This does not mean all changes occur immediately.

Under the maintained approximation that the WFTC affects Traditional Medicare spending through the indexed input-price channel, with utilization and other payment adjustments held fixed, the Section 7 calibration implies

$$\eta_{WFTC}^T \approx h_{WFTC} \approx 0.30.$$

It is less than one because the WFTC is changing provider tax rates and traditional Medicare is based on index-input prices rather than the commercial output price.

With a rebate percentage of 0.65 and a bid 24 percent below the benchmark, $B = 0.76H$, so federal payment is $F = 0.65H + 0.35(0.76H) = 0.916H$; therefore, the benchmark-linked share is $\lambda_H = 0.65/0.916 \approx 0.71$ for a representative below-benchmark MA plan. The co-movement of federal MA spending and the commercial output price induced by the WFTC is therefore

$$\varepsilon_{WFTC}^{MA} = \lambda_H(0.30) + 1 - \lambda_H \approx 0.50.$$

Finally, using spending shares of approximately 42 percent traditional Medicare and 58 percent MA over the relevant horizon,

$$\varepsilon_{WFTC}^{Medicare} = 0.42(0.30) + 0.58(0.50) \approx 0.41.$$

The companion report uses this logic to scale the non-Medicaid spending effect into federal Medicare savings. It estimates federal Medicare spending reductions of $50 billion to $88 billion over 2025-2034, depending on

the budget-score source and sensitivity scenario.[9] This does not count effects of Medicaid spending on Medicare utilization through capacity investment.

9. Conclusion

Medicare reimbursement is a regulated payment system embedded in ordinary health care markets. Traditional Medicare uses administered prices, but those prices are updated using input-price indexes, geographic labor adjustments, case mix, and other factors affected by provider markets. Medicare Advantage uses a regulated bid-and-benchmark system in which provider-market conditions affect plan costs, bids, rebates, premiums, networks, and supplemental benefits.

Broad provider supply and demand changes establish the benchmark case. Holding productivity and the tax wedge fixed, payer-facing output prices, net provider prices, and composite input prices generally move in the same direction, although indexed and non-indexed input prices may change by different percentages.

Other policies create distinct wedges. Scope-of-practice, licensure, team-based-care, and market-reach restrictions can reduce provider productivity Z_c, causing output prices to rise relative to indexed input prices. Certificate of Need laws and facility-entry restrictions can raise the scarcity value r of non-indexed factors. Provider taxes create a different wedge between the payer-facing price P and the net provider price p. When provider taxes are combined with state-directed payments, the observed effect reflects both the demand shift and the tax wedge.

For ordinary real-resource shocks, traditional Medicare and Medicare Advantage may both move in the same direction as provider output prices, though with different lags and regulatory transformations. For the WFTC provider-tax-and-SDP application, the companion calibration implies a smaller traditional Medicare response because the provider-tax component weakens the link between output prices and CMS input-price indexes. Combining the FFS and MA channels gives an estimated federal Medicare elasticity of about 0.41 relative to the non-Medicaid output-price effect.

The broader policy conclusion is that Medicare cannot be analyzed apart from provider markets. Even when Congress does not directly change Medicare payment rules, policies affecting provider labor, capacity, productivity, entry, and tax wedges can change Medicare spending, beneficiary benefits, and the distribution of savings between taxpayers and enrollees.

[9] ASPE working draft, "An Overview of State-Directed Payments and Medicaid Provider Taxes: History and Potential Effects of the Working Families and Tax Cut Legislation on Health Care Costs," June 5, 2026.

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