

UNIVERSAL UNITED STATES HEALTHCARE

Comprehensive Technical Research
and National Feasibility Assessment

2025-2054 | CONDITIONAL NATIONAL MODEL

26 benefit domains / 30 canonical event families / 4 accounting scenarios

Technical analysis v6; four-document editorial edition v7.
Working paper, not peer reviewed or an implementation approval.

October 28, 2026

Prepared for Dark Star Consulting Group

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Universal United States Healthcare

Document 4 — Comprehensive Technical Research and National Feasibility Assessment

Complete technical dossier — technical v6 / editorial v7 | October 28, 2026

Counterfactual model years: 2025–2054 (30 nominal years); **research stop line:** October 26, 2026

Status: internally reconciled, independently reviewable **working paper**, prepared for Dark Star Consulting Group. Not peer reviewed, a certified budget score, an enacted program, or a provider-safe tariff. The model starts retrospectively in 2025; no national implementation occurred in 2025 or 2026.

Reader's route through the four documents

- **Document 1:** one-page executive policy brief; an entry point, not an independent model.
- **Document 2:** 32-page conceptual feasibility synthesis and benchmark scenario comparisons.
- **Document 4 (this complete dossier):** the current technical analysis, 30-year calculation ledger, 40 research graphics, all assumptions and corrections, **the full historical research texts in Appendix N**, primary-source bibliography in Appendix O, and complete SHA-256 source register in Appendix P. This is one continuous report.

Also see [Document 3: 14-page conditional 100-year study and workbook](#).

Abstract and definitive analytic judgment

The proposed healthcare policy is **universal medically necessary care for U.S. residents, one primary public payer, independently operated providers, government-regulated service-specific reimbursement, and no point-of-care charge for covered services**. All 26 benefit areas remain in scope. It is **not** a claim that existing provider institutions will be nationalized, or that care becomes physically costless.

The anchor is CMS **2024 national healthcare expenditure of \$5.278588T**. Four deterministic policy accounting scenarios, labeled A–D, project conditional spending over the simulated 2025–2054 years. The **limited-commercial-fee central sensitivity**, not a full national tariff, produces a locally recalculated **approximately +\$15.68T** D less A over thirty years (full arithmetic control **+\$15.681257966T**; about **+\$15.681T** at Documents 1 and 2 display precision). Its accounting bridge is modeled expanded care and resources of **+\$25.660T**, conditional limited price credits of **–\$5.484T**, and conditional net insurer nonmedical credits of **–\$4.495T**. This is aggregate all-sponsor national healthcare spending, **not** \$15.681T of extra federal borrowing.

Four wider Medicare-reference, **mixed-source illustrative tariff sensitivities** yield values previously reported in Document 2 for thirty-year D–A of **+\$2.311T**, **–\$1.814T**, **–\$2.348T**, and **–\$4.066T**, respectively. Reproduction from rounded source ratios leaves modest numerical residuals that are fully disclosed in Appendix F. A negative D–A in these conditional mathematical examples establishes neither a real resource-efficiency gain nor sustainable reimbursement for the national provider network.

The newly recovered Step 107 source contains **30 exact service-event families and 3,600 A/B/C/D-by-year positions**, but its future completed-event and staffed-capacity values are null.

Step 124 screening populations and procedure scenarios remain a separate nonfinancial schedule. The source has therefore advanced documentary traceability, **not** completion of a national clinical demand forecast.

Feasibility verdict: **GO** for serious conceptual policy consideration; **NO** certified national fiscal savings; **NO-GO** for implementation on current evidence. Four later decision gates are (1) provider-safe prices, (2) staffed incremental capacity and clinical follow-through, (3) sponsor-by-sponsor financing and transfer, and (4) measured health and financial-protection value. The October 26 conceptual research stop line remains intact; this document is a critical edit and calculation reconciliation of the existing study, not a new implementation research program.

Measurement discipline and status dictionary

Observed = directly reported, population- and year-scoped source measurement. **Calculated** = reproducible transformation. **Assumed** = counterfactual scenario input. **Conditional sensitivity** = mathematical change under non-validated settings. **Unknown/null** = not established; no positive or zero numerical event presumed. **Withdrawn/superseded** = retained historically and marked not current. Different hospital and professional study sample ratios, public program payments, payer-service cells, sponsor contributions, clinical counts, and real resource costs are **not freely interchangeable**.

Reading rule: Chapters 1–20, Appendices A–M, O and P control the present analysis and source register. Appendix N contains the **complete historical research in this same volume**, with all original step identifiers. Its dated notes are preserved as evidence, not current instructions; they do not supersede the controlling analysis. The v1–v5 source manuscripts are preserved. Source URLs document provenance; listing a URL does not certify that its data transfer, assumptions or future application are valid. Figures and exact equations are explanatory material, not independent empirical validation.

Chronology warning: The policy years 2025–2054 were fixed for a thought experiment developed in October 2026. Thus 2025 and most of 2026 are **retrospectively modeled counterfactuals**, not implemented or forecast rollout years. Any prospective policy proposal needs a fresh base year, re-estimated sponsor flows, and updated clinic/provider data.

Source-comparability warning: The four deeper Medicare-reference rows apply rounded ratios from different commercial datasets to CMS national spending cells. The Milliman 2024 published ratios, for example, are 205% inpatient, 263% outpatient and 143% professional; legacy example inputs of roughly 206%, 260% and 142% are **not exactly those printed national values**. The HCCI-derived outpatient mix is also not independently validated as a national Medicare-normalized hospital conversion weight. Treat the four outcomes as research illustrations with unresolved source mapping, not calibrated national results. See Appendix F.

Navigation: The table of contents links the current findings, every technical appendix, the complete historical source record and the final reconciliation, all within this document.

Part I — Design and counterfactual

Chapter 1 — The existing United States healthcare system

The problem under examination is not limited to the absence of an insurance card. National health-care expenditure passes through multiple public and private payment systems, while patients encounter separate coverage decisions, provider networks, direct charges, and medical debt. A more unified payer could reduce one layer of fragmentation, but it would not by itself manufacture clinical time, beds, diagnostic equipment, or specialty access.

The economic frame must therefore separate who sponsors care, which payer processes claims, which service is delivered, and what the service actually costs to produce. Adding Medicare or Medicaid payments to ultimate federal sponsorship, or adding uncompensated charges to national expenditure as fresh resources, would count the same underlying dollars more than once. The existing-system comparison is Scenario A; it is the counterfactual against which all incremental reform results are tested.

National aggregates can mask severe household and geographic variation. Commercial allowed rates may differ sharply from Medicare benchmarks without the chargemaster-to-drugstore price comparison being an independently recoverable savings pool. Financial hardship, delayed care, network restrictions, and provider viability are all relevant, but each requires its own denominator and causal logic.

Technical distinction: financial sponsor, claim payer and actual treatment resources

A person may see one insurer's claim payment while the ultimate dollars originate from wages, employer contributions, state taxes, federal receipts and household payments. An actual delivered encounter, the claim allowed amount and the payer's finance source are **different units**. An all-sponsor U.S. spending total contains the expenditure whether paid by private insurance, Medicare, Medicaid or the patient; shifting responsibility among those agents is not itself a medical-cost saving. Historical national expenditure captures goods and services, insurance nonmedical activity, public health and investment using distinct categories.

This distinction controls the evaluation of the proposed single primary public payer. Fewer payer networks could improve routing and billing, yet they do not automatically open more clinical appointments. A reimbursement reduction may lower measured medical expenditure while reallocating income away from a hospital; only a supported decrease in overhead, procurement input prices or care resources constitutes a verified physical efficiency. Medical debt is a liability and collection problem, not a separate second national medical service already waiting to be deducted from the claims baseline.

Baseline caution: The CMS 2024 annual health expenditure amount is an observed historical anchor, whereas spending growth in 2025–2054 is a policy model assumption. Neither category is an enacted future federal budget. The correct external comparison therefore reports national all-payer A and D, then separately reports the potential governmental financing transfer and any demonstrated clinical value.

Direct source references: CMS, 2024 National Health Expenditure Accounts; CMS, 2024 NHE fact sheet. Model numbers and hypothetical reductions are **our scenario calculations**, not find-

ings published by these agencies.

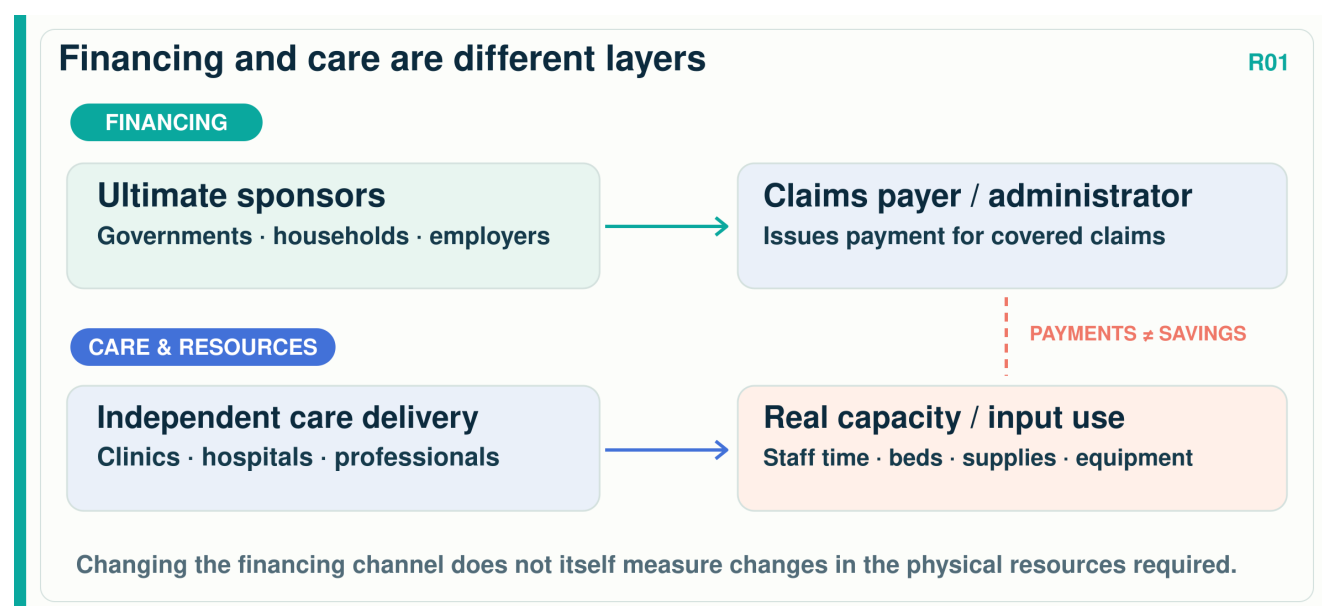


Figure S01 | R01: Financing and care are different layers Funding, claims, services, and real inputs are different accounting layers.

Chapter 2 — The proposed healthcare system and the complete benefit scope

The tested design uses one primary public payer to finance a broad benefit package while retaining independent healthcare delivery. National rules would define eligible covered services and allowed reimbursements, with service-specific price standards and appropriate adjustments for acuity, geography, education, standby capacity, and safety-net roles. For covered medically necessary care the patient would not face an additional charge at the time of service; the corresponding provider expense would still require funding.

These services define the policy scope, not 26 independently actuarially priced national forecasts. The existing four-scenario financial calculation models their broad expansion using aggregate national care and catch-up allowances. We never quietly remove dental, long-term services, behavioral health, or other costly benefits to achieve a preferable expenditure result.

Benefit-to-event translation and the promise being tested

The established **26 benefit domains** explicitly retain prevention, primary and emergency care, maternity/pediatric health, inpatient and outpatient treatment, oncology, dialysis, drugs, dental, vision, hearing, behavioral care, substance-use care, rehabilitation, devices, home health, long-term care, skilled postacute services, hospice and navigation. These are substantive coverage commitments, not placeholders to remove if a savings target looks unfavorable.

The canonical demand schema has **30 service event families**. Examples include ambulatory_encounter, lab_completed_assay, imaging_exam, outpatient_procedure, home_health_visit, long_term_direct_care_hour and navigation_case_contact. A benefit may require more than one event family, and a single clinical episode may generate multiple procedure or billing lines. Accordingly, multiplying 26 categories by 30 event families, or adding a clinical screening enrollee and their completed test as two procedures, would duplicate demand.

The operational promise is covered medically necessary care without an additional patient payment at the point of service, delivered by independent providers compensated through a national reimbursement framework. It **does not** imply every possible elective service has been unconditionally approved, or that expenses disappear when a copay disappears. Eligibility, service necessity, reimbursement adequacy, safety-net support, and real access remain part of an eventual coverage and provider contract, not settled national measurements.

Direct source references: CMS NHE program and spending measures; U.S. Preventive Services Task Force, breast screening. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

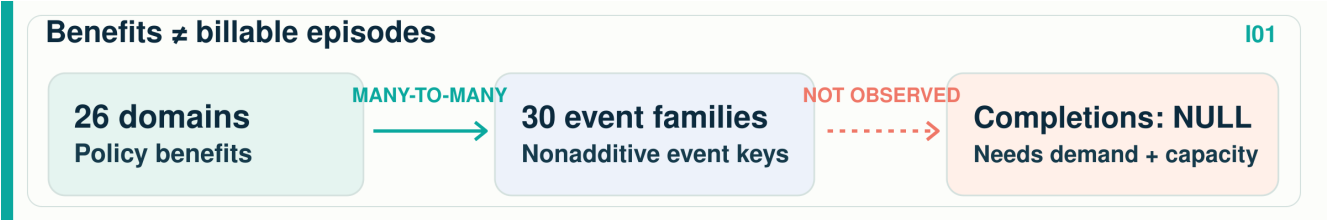


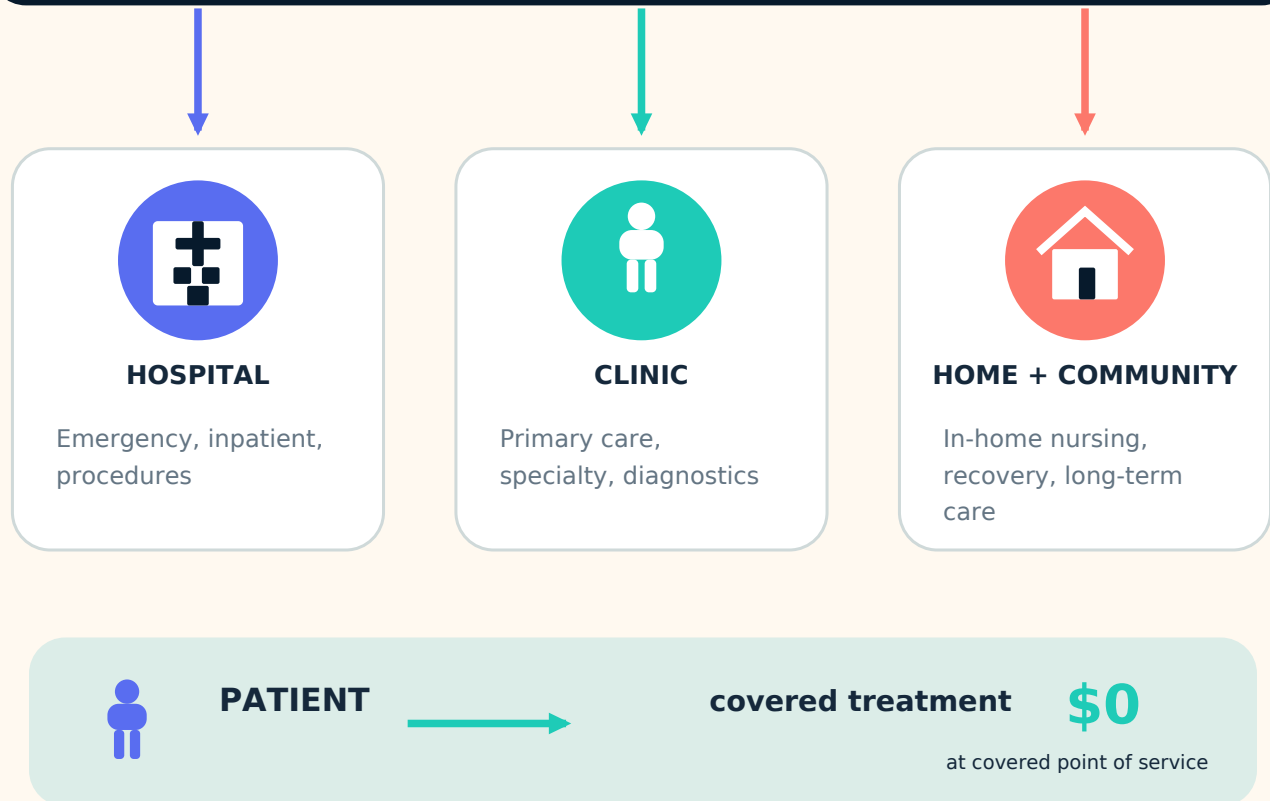
Figure S02 | I01: Benefits ≠ billable episodes Coverage domains and event-family keys are not additive episode counts.

One payer. A whole network of care.

A unified claims route changes payment administration; clinicians and facilities remain distinct.

PUBLIC FINANCING + CLAIMS

One payer, common covered-service rules



PARTICIPATION

Providers must accept the terms

STAFFED HOURS

Appointments are finite

LOCAL ACCESS

Distance still matters

A common insurance card does not create new operating rooms, staffed appointment hours or geographic access. A real provider-safe reimbursement model is required.

What does universal care actually include?

The full proposal spans 26 benefits, organized into six linked clinical journeys.



26 BENEFITS

30 TECHNICAL EVENT FAMILIES

Coverage is a promise to fund clinically appropriate services. Billing definitions, delivery pathways and real staffed capacity still require separate validation.

Chapter 3 — Research questions, counterfactuals, and analytical scope

The main expenditure questions are evaluated after five, ten, twenty, and thirty modeled years. The study separately examines provider financial viability, newly accessible demand, physical treatment throughput, possible earlier diagnosis, household financial protection, and the threshold health value that could justify additional spending. The figures are deterministic sensitivity outputs, not probabilistic predictions or observed operation of a new policy.

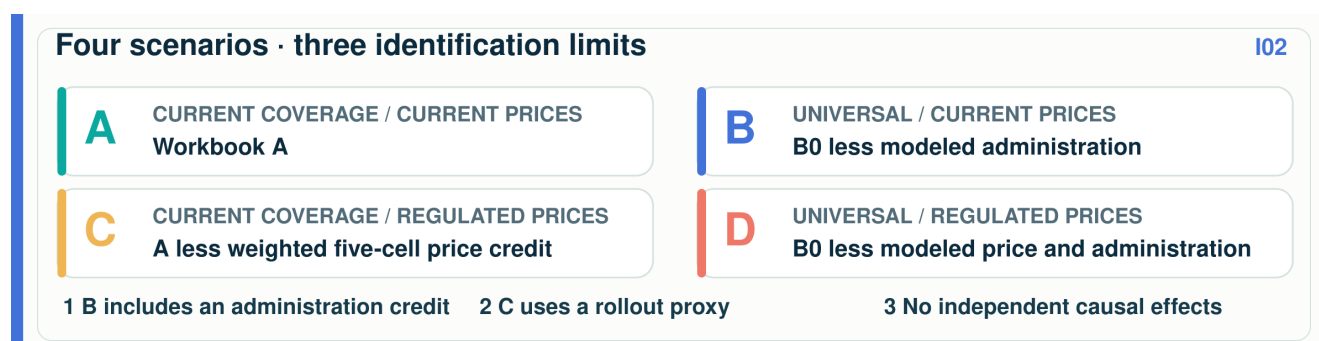


Figure S03 | I02: Four scenarios · three identification limits Accounting contrasts do not independently identify causal policy effects.

The research question has been answered at the **conceptual feasibility** level. The present report documents existing work and its uncertainty; it does not authorize a new twenty-year staffing study, a complete tax code, or a facility-by-facility tariff-setting project.

Identification caveat: The implemented B column contains conditional net administration efficiencies and C reuses the universal coverage phase-in for regulated-price deployment. Thus the four columns are scenario accounting contrasts rather than independent causal coefficients of coverage and tariff policy (Appendix B).

Identification of the A/B/C/D comparisons

The conceptual two-by-two design compares current versus universal coverage and existing versus regulated payment rates. Its **implemented formulas have narrower interpretations** than pure causal isolation. Scenario B credits a conditional reduction in insurer nonmedical expenses, making B more than just universal care at unchanged administration. Scenario C applies a regulated-price cut using the universal coverage rollout as a phase-in proxy even while the C coverage label stays ‘existing’. D combines both.

Therefore D–A is a reproducible conditional model contrast, but B–A, C–A, and D–C are not independently identified empirical treatment effects of a single policy lever. A true implementation study would separately control phase-in of eligibility, payer administration and the tariff. There is no observed random assignment, causal demand elasticity or real-world national universal-plan claims file to infer those effects directly.

The research has deliberately stopped at conceptual feasibility, and the scenario framework must be presented as such. Policy development can use the four equations for threshold analysis, while withholding any claim that the deterministic simulation is a probability distribution or a legislatively scored U.S. government forecast.

Direct source references: CMS, current national healthcare spending concepts. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

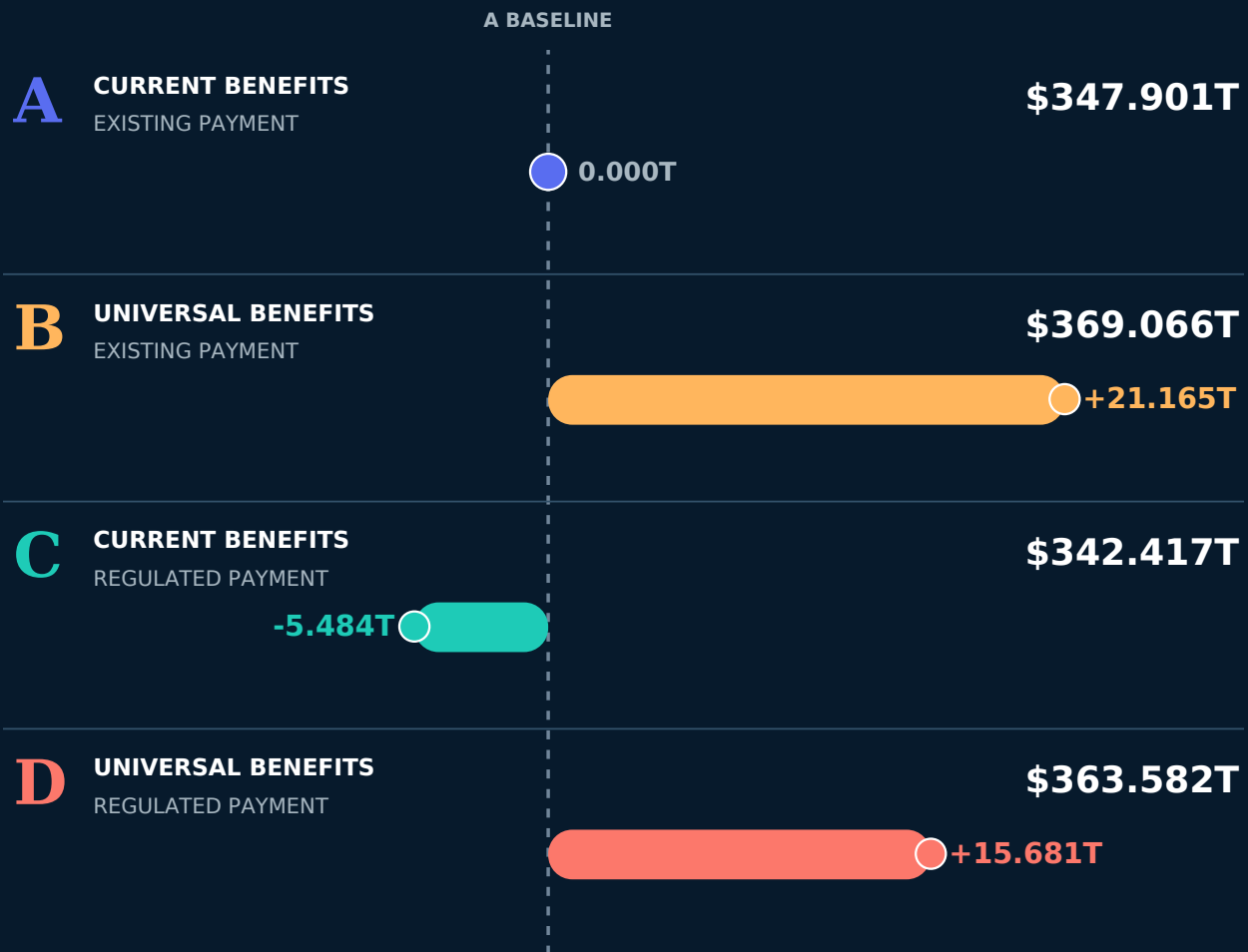
Same population. Four spending assumptions.

Each case changes covered services, payment rules or administrative savings.

30-YEAR NATIONAL EXPENDITURE / NOMINAL \$T

SIGNED DIFFERENCE VS A

TOTAL SPEND



D - A +\$15.681T

Conditional full-scenario difference; not a measured causal effect

4.51% ABOVE A

B includes a conditional administration reduction; C shares D's rollout multiplier for repricing. A-to-D is the comparison of whole assumptions, not a controlled causal effect.

Part II — National finance and payment

Chapter 4 — The observed 2024 national expenditure baseline

CMS's 2024 National Health Expenditure Accounts provide the principal common accounting denominator of \$5.278588 trillion. Personal healthcare spending is approximately \$4.510222 trillion; other categories include insurance nonmedical expenditure, public health, and investment. A payer is the source of a provider claim payment, whereas an ultimate sponsor identifies the household, business, government, or other sector ultimately financing expenditure. Their tables represent different dimensions of the same system and cannot be stacked.

The source-specific service/payer matrix identified approximately \$558.936 billion in private-insurer hospital payments and \$505.059 billion in private-insurer physician/clinical payments during 2024. These are observed commercial-payment pools, **not** measured excessive prices. The relationship among service, payer, and sponsor categories and the independent rounding residuals controls every subsequent national-repricing calculation.

The national analysis retains the difference between 2024 observations, 2025 population denominators, the 2025–2054 hypothetical financial years, and distinct clinical and hospital source years.

Source classification and arithmetic denominator audit

The 2024 CMS NHE baseline in the source workbook is **\$5,278.588 billion**; a public CMS factsheet displays this as **\$5,278.6 billion**. Hospital and physician/clinical totals in all-payer CMS reporting are not equivalent to the smaller **private-insurance-financed** amounts used by the Step 120 repricing bridge. For example, commercial hospital payments are **\$558.936B** and commercial physician/clinical payments are **\$505.059B** in the research's reconstructed payer matrix. Their source-year units are billions, not percentages or allowed-charge markups.

The separately observed **\$176.458B** 2024 private-insurer nonmedical expenditure is an insurance operational category; it is neither the hospital payment pool nor a measured program budget that a public payer could eliminate entirely. Sponsorship allocations also come from a distinct accounting axis, so adding premiums, business contributions and government claim payments without checking their sponsor attribution counts dollars twice.

The direct price reduction shown in the conditional middle case is constructed from five 2024 service/payer cells—not from a generic assertion that 45% of all healthcare claims are repriceable. Other commercial services, newly delivered marginal care and existing public-payer fees are not silently given the same assumed discount. See Appendices D and E for the exact cells and sponsor conservation rules.

Direct source references: CMS, 2024 historical NHE data; CMS, April 2026 Fast Facts (2024 NHE). Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.



Figure S04 | R02: 2024 NHE base: spending, funding, sponsor The NHE spending denominator is not a second sponsor or payer total.

Chapter 5 — The thirty-year financial model and calculation contract

The starting A path grows the observed 2024 national spending anchor by an assumed 5.4% annually through 2034 and 4.0% from 2035 through 2054. B adds the modeled provision of universal covered care without introducing the separately tested service repricing. Additional ongoing care is represented by a 6% allowance; capacity investment by a 1% allowance; deferred-care delivery by a dollar queue with a 3%-of-baseline annual throughput ceiling. Those are scenario controls, not observed treatment units.

The retained limited-price middle case adjusts the legacy B0 annual expenditure by two nonoverlapping conditional reductions: measured 2024 commercial-service payment pools times chosen fee reductions, and a net fraction of private-insurer nonmedical expenditure after replacement administration. The formulas and year-specific annual table in Appendix C are independently reconstructed from the legacy workbook’s unrepriced B0 path, rather than falsely representing the unchanged provisional workbook as the final price-adjusted model.

The study does not use an unsupported national clinical-cost offset to improve the result. Each model component must carry its units, measured source, scenario fraction, and overlap restrictions. A dollar queue is not a count of patients or verified available clinician slots.

Exact v3 calculation: The \$86.11297B annual-equivalent price credit is recomputed from five CMS-linked private service cells. The original unadjusted workbook B0 path remains the sole volume/expansion input. Chapter 20 and Appendices C–D expose every annual value and the former \$86.1128B rounding convention.

Annual equations and deferred-demand guardrails

The provisional annual workbook supplies a baseline A and a pre-efficiency universal expansion path B0. Both are in **billions of nominal dollars** for each model year. A uses **5.4% assumed nominal growth** through 2034 and **4%** thereafter; coverage reaches 20/40/60/80/100% across

2025–2029. A dollar proxy for newly paid ongoing care and the deferred-care queue is embedded in B0 using the historical 6% recurring care, 1% capacity investment and 3%-of-baseline maximum annual deferred care expenditure.

Define $w_t = A_t \times \text{rollout}_t \div 5278.588$. Step 120’s exact selected service reductions sum to **\$86.11297B** at the 2024 base, and Step 121’s selected net administrative assumption is **\$176.458B × 0.40 = \$70.5832B**. The four displayed rows then follow $B=B0-w\times\text{admin}$, $C=A-w\times\text{price}$, $D=B0-w\times\text{price}-w\times\text{admin}$ (billions). These inputs are independently summed across the 30 years in Appendix C.

The original 30-year workbook’s C/D provisional columns are not the later revised service-specific results; their reuse as final values would be a source-selection error.

Direct source references: CMS, observed 2024 historical base. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

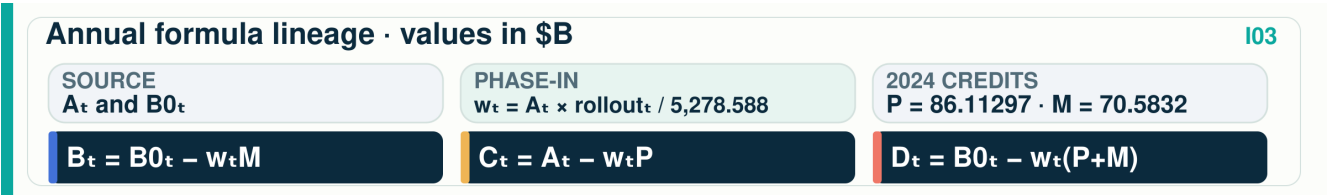
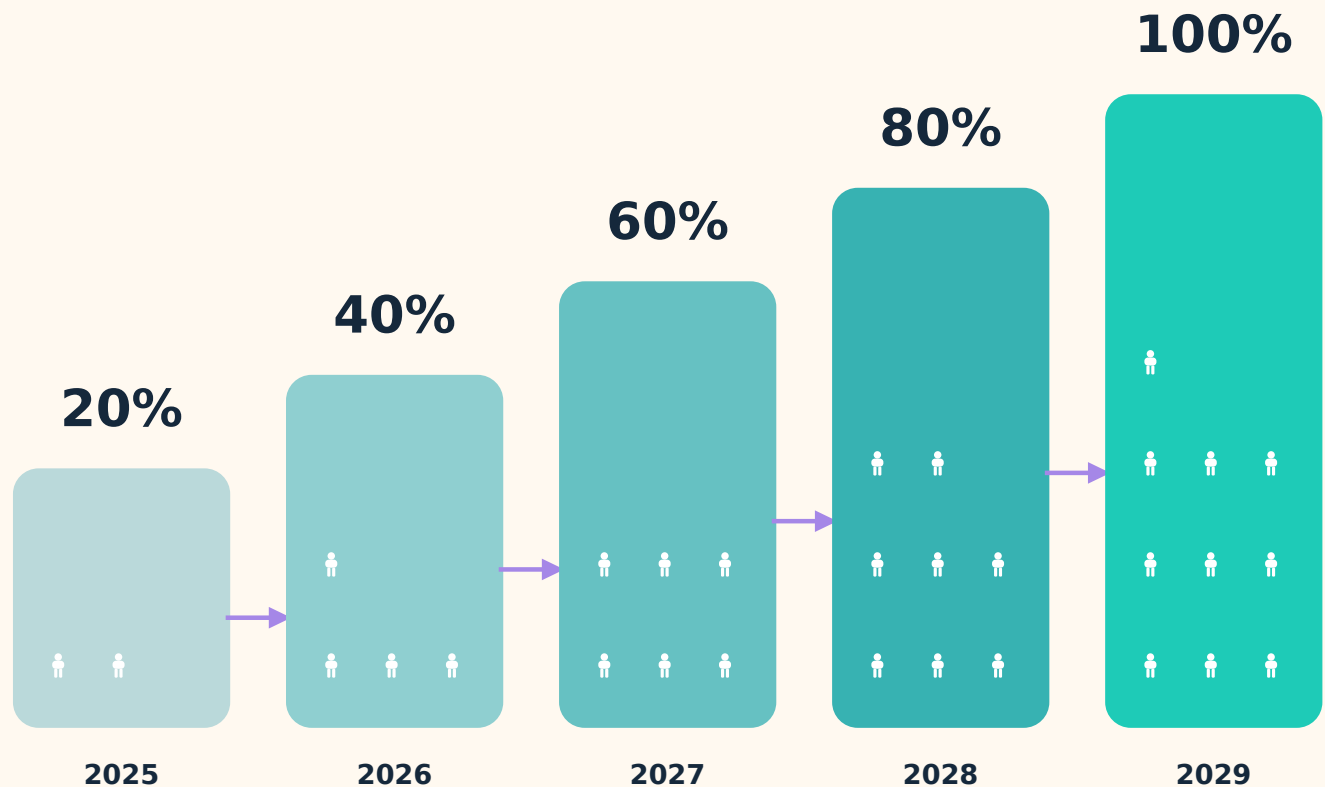


Figure S05 | I03: Annual formula lineage · values in \$B Annual modeled dollars follow the verified 2024-equivalent calculation contract.

Five years on paper. Three real-world gates.

Coverage phase-in is simulated; provider participation and financing must be demonstrated.

HYPOTHETICAL COVERAGE PHASE-IN



2029 | 100% COVERAGE IN THE MODEL



PAYMENT

Viable tariffs + claims systems



CAPACITY

Real staff + facility hours



FINANCE

Sponsor cash + transition reserves

The scheduled 2029 100% uptake is a spreadsheet input, not evidence of capacity, certified clinical readiness or an enacted funding mechanism.

Chapter 6 — National expenditure results for all four scenarios

The later comprehensive-price investigations changed the interpretation of this middle case. It represents a restricted pricing experiment—not the definitive cost of broad government-set payment ceilings. Separate deeper-payment sensitivities can move long-run D less A toward or across zero without removing the benefit scope; provider-safe feasibility remains unproven.

Reconciled thirty-year identity: $B_0 - A = +\$25.660146628T$; category-exact conditional repricing = $-\$5.483935823T$; net administration = $-\$4.494952839T$; therefore $D - A = +\$15.681257966T$. The 5/10/20/30-year table appears in Appendix C. All figures are nominal scenario calculations, not a federal budget score.

Thirty-year expenditure bridge, with years and units

Thirty-year model component (2025–2054)	Nominal \$T	Interpretation
Existing-system A total	347.901099	Baseline extrapolation
Unadjusted expanded-care B0 total	373.561245	Coverage plus assumed services/investment/queue
Additional B0 above A	+25.660147	Expansion and related nominal spending
Selected service-specific repricing	–5.483936	Applied to distinct private-payer spending cells
Selected net insurer administration efficiency	–4.494953	Conditional 40% net nonmedical reduction
Combined D total	363.582357	B0 less both modeled efficiency components
D–A	+15.681258	Model comparison, not a federal deficit

Positive near-term spending is consistent with a policy designed to pay for necessary care previously missed or delayed; the scenario still must fund those services and maintain clinical throughput. By construction, the expenditure comparison measures recorded healthcare payments, not necessarily real material inputs or clinically valid costs. Appendix C supplies each year's A/B/C/D without concealing the pre-efficiency B0 input.

Direct source references: CMS NHE historical accounts; source for base only. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

How much does universal care cost?

A 30-year national spending equation, not a federal borrowing estimate.

\$363.582
TRILLION

SCENARIO D / SELECTED MIDDLE CASE

+\$15.681T

More covered care costs more than the two conditional efficiency credits save.



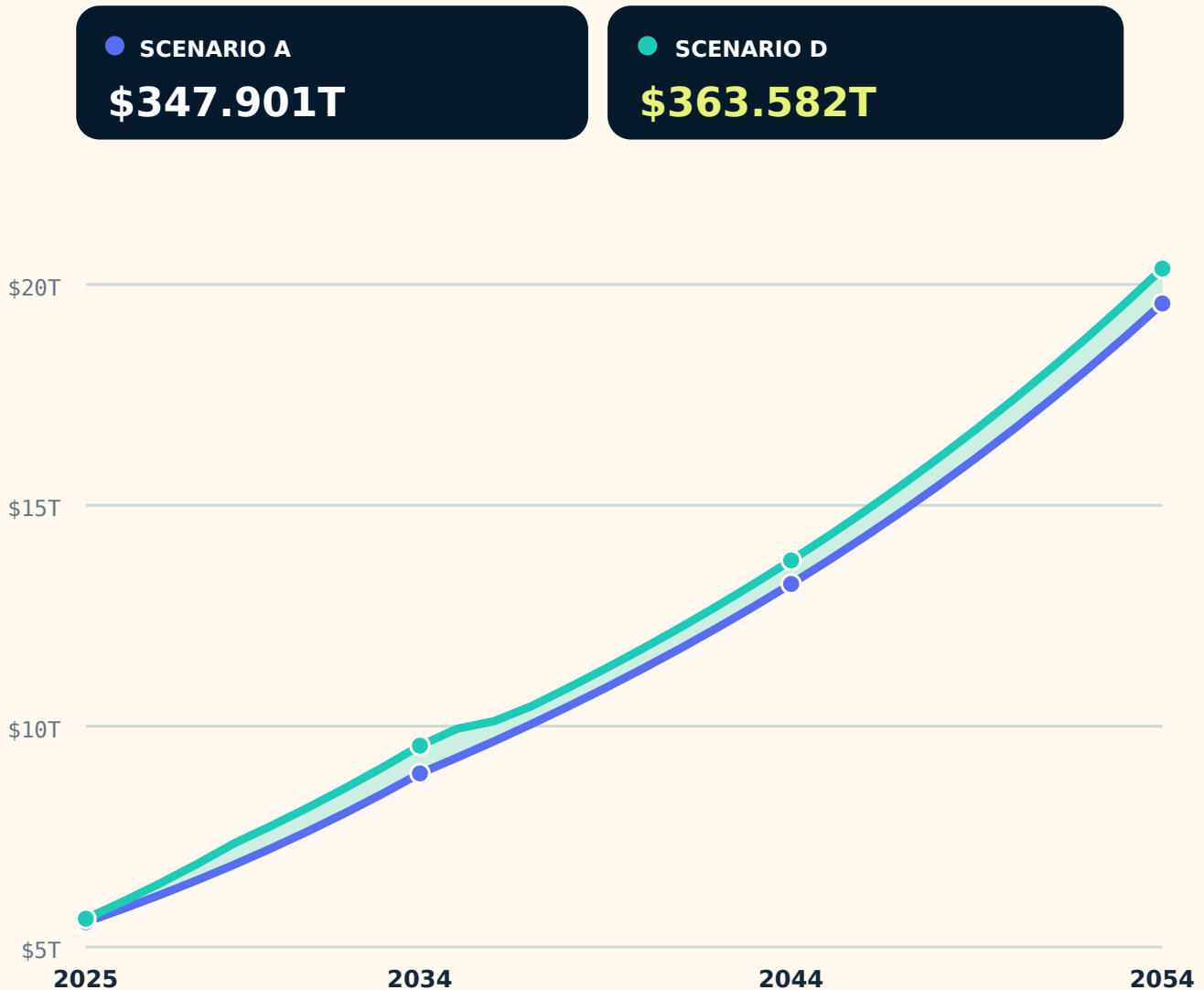
$$347.901 + 25.660 - 5.484 - 4.495 = 363.582$$

ALL FIGURES NOMINAL \$T | APPENDIX C CENTRAL SCENARIO

Additional care +\$25.660T, minus repricing \$5.484T and conditional administration \$4.495T. Total recorded national healthcare expenditure rises \$15.681T.

Two spending paths diverge over time.

The 2025–2054 Appendix C ledger charts national nominal payments under A and D.

**30-YEAR GAP****+\$15.681T****Spend is not capacity**

This accounting forecast is not independent proof of real labor and supply costs, a federal appropriation, or an achievable clinical throughput plan.

Chapter 7 — Service-specific regulated prices and national savings exposure

The original model's 45%-of-all-expenditure repricing share was an analyst assumption, not a measured population of eligible commercial claims. Step 118 demonstrated the sensitivity of break-even to that denominator; Step 119 replaced the broad assumption with actual CMS 2024 service-by-payer categories; Step 120 applied separate assumed fee changes to mutually exclusive commercial payment pools. The corrected limited middle case uses approximately a 10% reduction on existing commercial hospital payments, 5% on commercial physician/clinical payments, and selected smaller category reductions.

The broader proposal examined in this study sets allowed reimbursement amounts for comparable services, rather than make merely modest adjustments to commercial reimbursement. Medicare multiple sensitivities and published allowed-payment comparisons demonstrate mathematical room for a very different spending result, but these are not direct claims-level nationwide tariff forecasts. The sampling populations of RAND, JAMA, Milliman, HCCI, and CMS categories differ, and effective price reductions depend on true service mix and clinical setting.

The model must not advertise an illustrative Medicare payment multiple as safe for every hospital, practice, or essential service. A provider-support pool, existing IME/DSH funds, rural readiness, service-specific costs, and adjustment for newly covered utilization can materially change the final affordable price design.

Comprehensive price experiments: The four source-mix cases and their reproduced equations and published-versus-recomputed billion-dollar rounding residuals are in Appendix F. None can be converted into a safe national tariff by asserting that Medicare multiples cover fixed standby costs.

Why pricing is the pivotal unresolved mechanism

The earlier whole-NHE model treated an assumed 45% share as exposed to broad fee cuts; Step 118 found that eligibility assumption could materially determine apparent break-even. Steps 119–120 rebuilt the limited-middle calculation on CMS 2024 categories: **–10% of \$558.936B private-insurer hospital**, **–5% of \$505.059B private-insurer professional/clinical**, and **–2%** of three other smaller commercial service pools. The five-cell reduction is **\$86.11297B** in equivalent 2024 payments, not a measured cost-of-care saving.

The deeper 135%-of-Medicare hospital/100%-professional examples use JAMA, RAND, Milliman and HCCI ratios or mixes constructed from different source populations. Four source-mix versions of nominal 30-year D–A range from **+\$2.311T to –\$4.066T** in the originally reported example table; they are not a 95% confidence interval. Unlike a calibrated nationwide claims forecast, each has an illustrative **\$25B 2024-equivalent hospital-support term** and nonvalidated implications for high-cost practices, rural standby care, teaching and safety-net providers.

Appendix F shows both original reported results and an independent reconstruction from rounded study inputs. The residuals of **\$0.109B to \$3.941B** over 30 years cannot be conclusively assigned to rounding alone without the exact source-side blending code, weights and effective ratios; rounding is a plausible contributor, **not a proved explanation**. Neither the lowest-price mathematical row nor a facility sample identifies a provider-safe tariff for all 26 benefit lines.

Direct source references: CBO, market price policy approaches; RAND, 2024 hospital price comparison (different claims sample); CMS, 2024 spending by service and payer. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

Five-cell commercial repricing: exact bridge

R03

2024-equivalent conditional annual payment reduction

\$86.11297B



Payment class	Commercial pool	Assumed cut	Credit \$B
Hospital	\$558.936B	10%	55.89360
Physician / clinical	\$505.059B	5%	25.25295
Other professional	\$57.303B	2%	1.14606
Prescription related	\$172.095B	2%	3.44190
Durable medical equipment	\$18.923B	2%	0.37846

Five distinct modeled service cells; not a uniform 45% cut or observed treatment-cost savings.

Figure S06 | R03: Five-cell commercial repricing: exact bridge Five distinct commercial payer-service cells; conditional payment change only.

Chapter 8 — Administration, medicines, fraud, and other nonprice offsets

Other promising mechanisms—provider billing simplification, drug purchasing, payment integrity, avoidance of late-stage disease, and reduced collection activity—cannot be assigned full recurring national savings merely because they are desirable. Medical-debt stock is not annual health expenditure; hospital write-offs are not dollar-for-dollar tax rebates; and a newly prevented or delayed clinical event requires matched follow-up and treatment costs before becoming a national cash offset.

This chapter preserves the separate source denominators and explicit \$0 additional verified cash credit for unmeasured channels. Zero credited is not a prediction of zero real-world benefit.

Nonoverlapping expenditure credits versus social benefit

The only explicit nonprice cash credit in the central D workbook reconstruction is the **assumed net** 40% reduction of CMS's 2024 **\$176.458B** private-insurer nonmedical expense base, scaled across model years. It presumes new public payer administration still exists and that replacement costs and migration burdens are netted out; no separately specified staffing budget proves this 40% is achievable.

The research separately investigated patient billing burden, drug procurement, improper payments, medical debt, unpaid hospital bills and earlier diagnosis. None authorizes an unconditional extra recurring national savings line in the baseline. Public accounting write-offs are not tax refunds, and a debt balance is not an annual extra episode of care. A drug purchase price may already be inside the Step 120 retail prescription category; counting manufacturer concessions twice would exaggerate savings.

For prevention, real medical spending may **increase** through additional screening, early-stage

treatment, long-term survival and false-positive investigations even while health improves. The dossier therefore records QALYs, functioning, access and financial protection separately from unverified avoided-claim dollars. This is not a finding of zero benefit: it is a refusal to enter a favorable, unmeasured subtraction into the national expenditure model.

Direct source references: CMS, NHE historical administrative spending classification; CBO, budgetary effects of preventive medical services. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

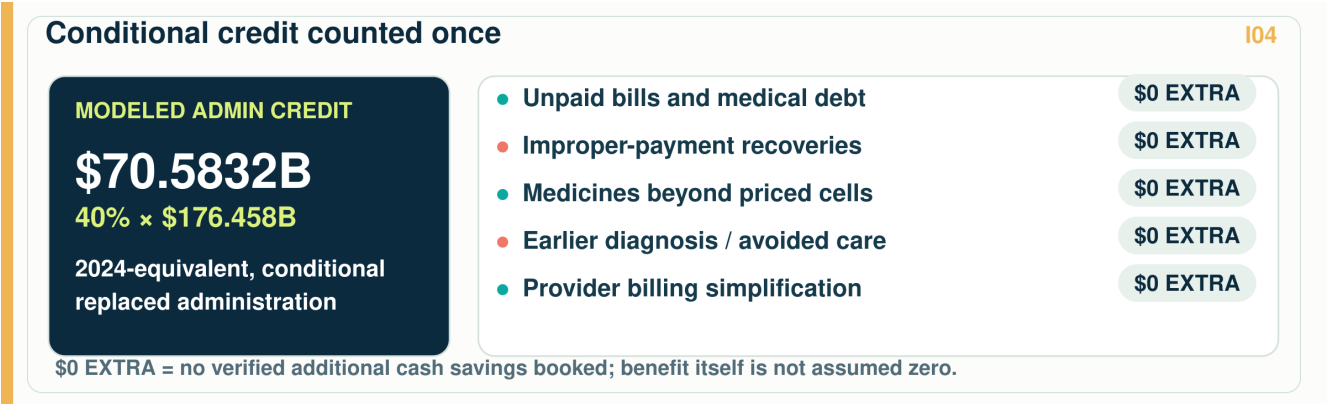


Figure S07 | I04: Conditional credit counted once Unverified extra savings receive no additional budget credit.

Administration does not disappear.

A modeled 40% NET credit assumes the replacement system still costs money.

INSURER NONMEDICAL POOL / 2024

\$176.458B

40% ASSUMED NET SAVINGS

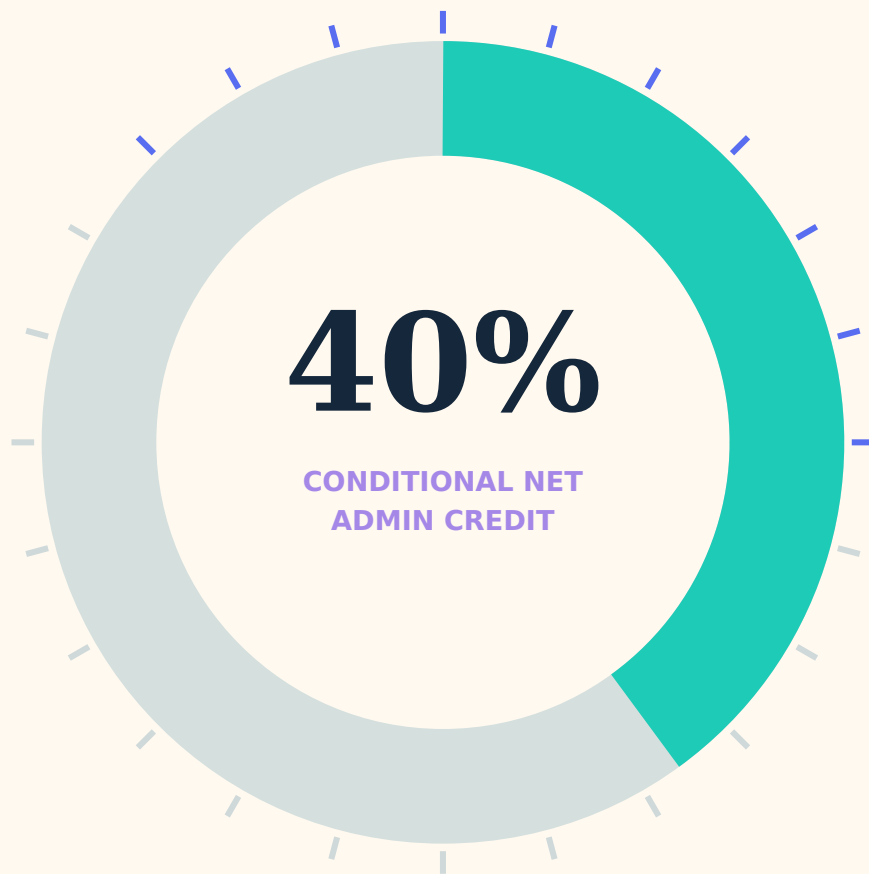
\$70.583B

Illustrative 2024-equivalent

FULL 2025-2054 MODEL

\$4.495T

Conditional cumulative credit already deducted inside Scenario D



60% OF THE 2024 BASE IS NOT CREDITED AS SAVINGS

Real public claims, technology, compliance and transition expenses still need costing.

This conditional credit is already included in the \$363.582T Scenario D total. Public claims processing, oversight, technology, migration and staffing still exist.

Improper payments are not a savings forecast.

Detection data must be separated from recoverable fraud and future program savings.

GAO / FY2023

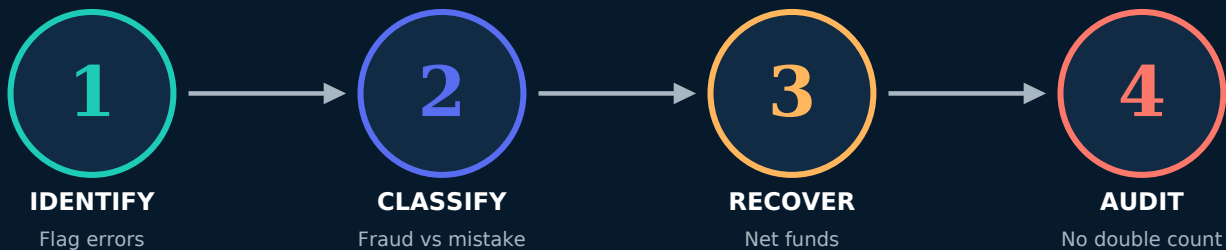
>\$100B

Medicare + Medicaid estimated
improper payments

CMS / FY2024

\$207M

Fraud Prevention System edit result



\$0

ADDITIONAL UNVERIFIED FRAUD SAVINGS

ENTERED INTO THE CENTRAL EXPENDITURE MODEL

Improper-payment statistics include documentation and other errors. No newly generated fraud savings can be booked without a distinct recoverable-cash estimate.

Chapter 9 — Ultimate sponsors, financing transfer, and affordability

A publicly administered claims system would have to redirect an immense flow of money currently financing the same patients’ care through government programs, employers, households, and other sponsors. That redirect is not itself a new national resource expense. The correct comparison for incremental care-system expenditure is D minus A; the entire D spending total is the operating finance requirement, not a new spending increment.

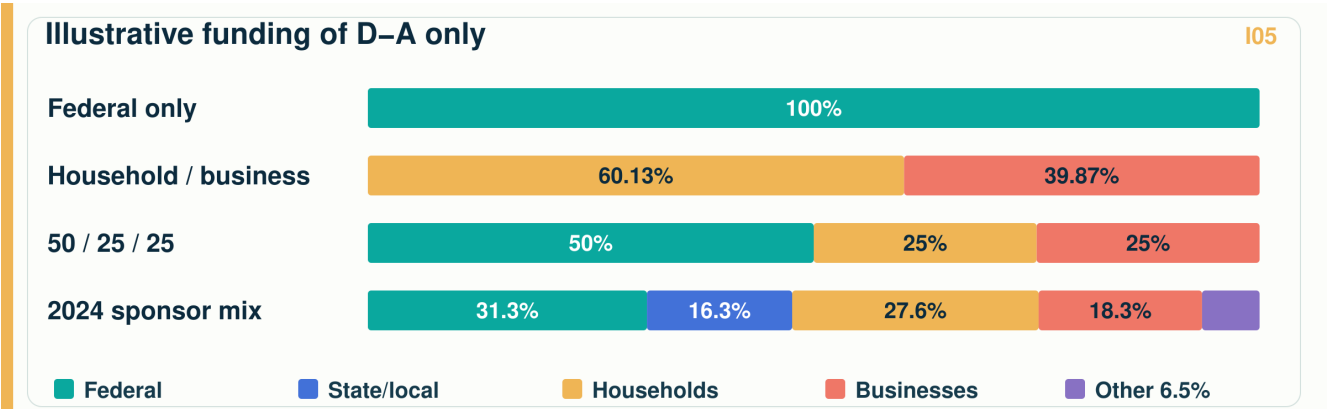


Figure S08 | I05: Illustrative funding of D–A only Illustrative incremental funding shares, not adopted contribution rates.

Because the rollout share represents coverage phase-in rather than actuarially measured expenditure share, the five-year funding bridge remains a conservation-of-funds illustration, not a verified transition cash score.

Four hypothetical marginal financing splits, household and employer denominator stresses, and IRS-based progressive examples explore distributional feasibility without selecting tax legislation. Real contributions, premium cancellations, payroll effects, old-claim run-off, program transfers, reserves, and payment timing remain to be determined in an implementation stage.

Conservation of existing sponsor payments

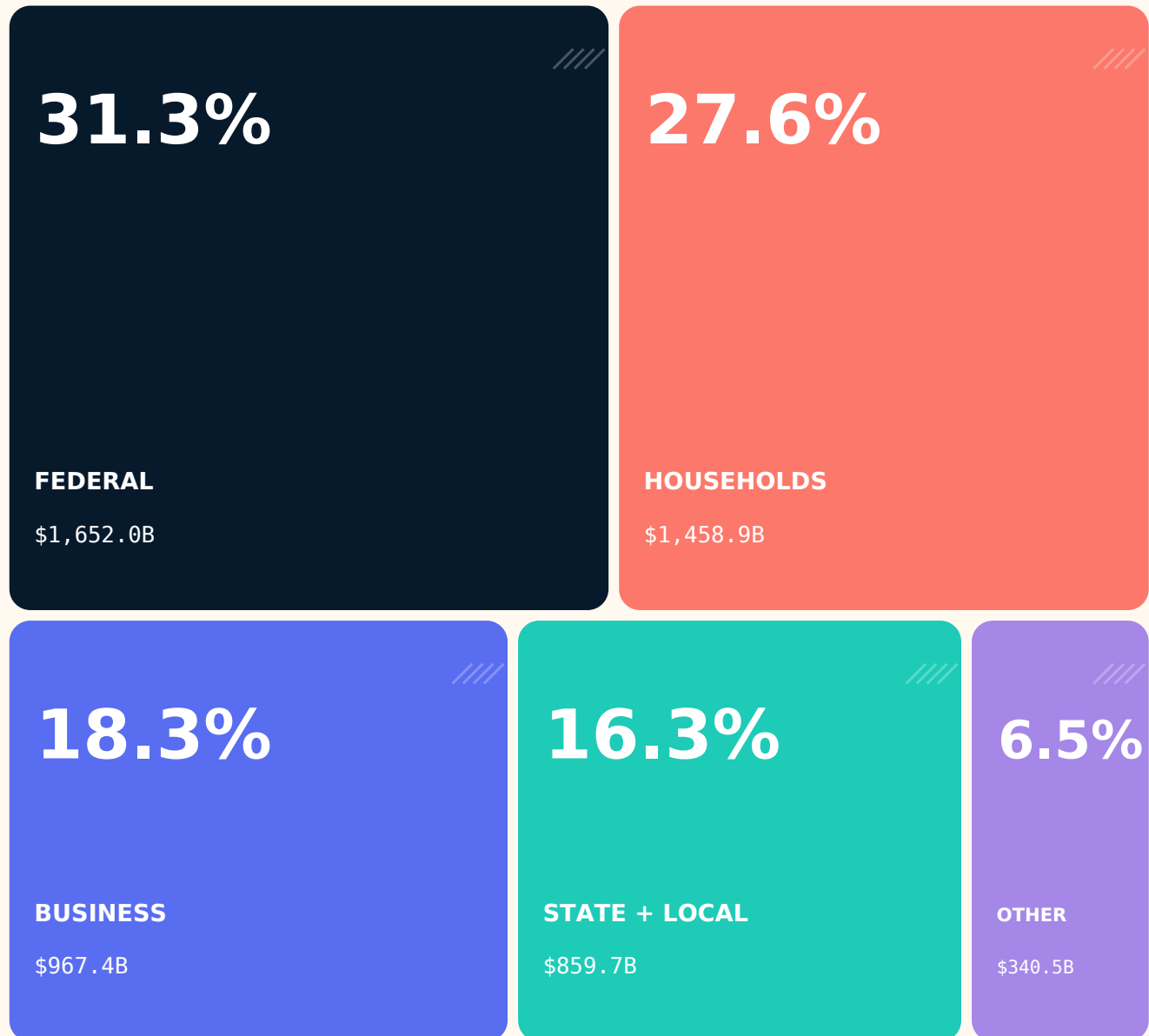
The national reported control is roughly **\$5,278.6B**, with the one-decimal difference arising from independent source-cell rounding. The financing transfer must map a previously paid claim and its original sponsor **once** into the new collector. Employer premium relief is not net social cash savings without accounting for substitute payroll/tax transfers and wage or benefit adjustments. A state/federal remittance is not new medical spending when it finances the same service already counted under NHE.

An older model assumption that the unified regime is 85% government-financed is **not** established by the creation of one public payer; the remaining share cannot be silently a covered-patient copay under the promised \$0 point-of-service design. A five-year illustrative transfer allocates existing national expenditure across public/legacy claims plus D–A incremental finance, but phase-in of people is not verified equal to phase-in of dollars. Federal, state, employer and household distributional burdens require an independent year-by-year funding design; they are not inferred from D total alone.

Direct source references: CMS, National Health Expenditures by sponsor and payer. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

The healthcare dollar has five sponsors.

CMS 2024 measured national expenditure: \$5.278588 trillion across ultimate sponsors.

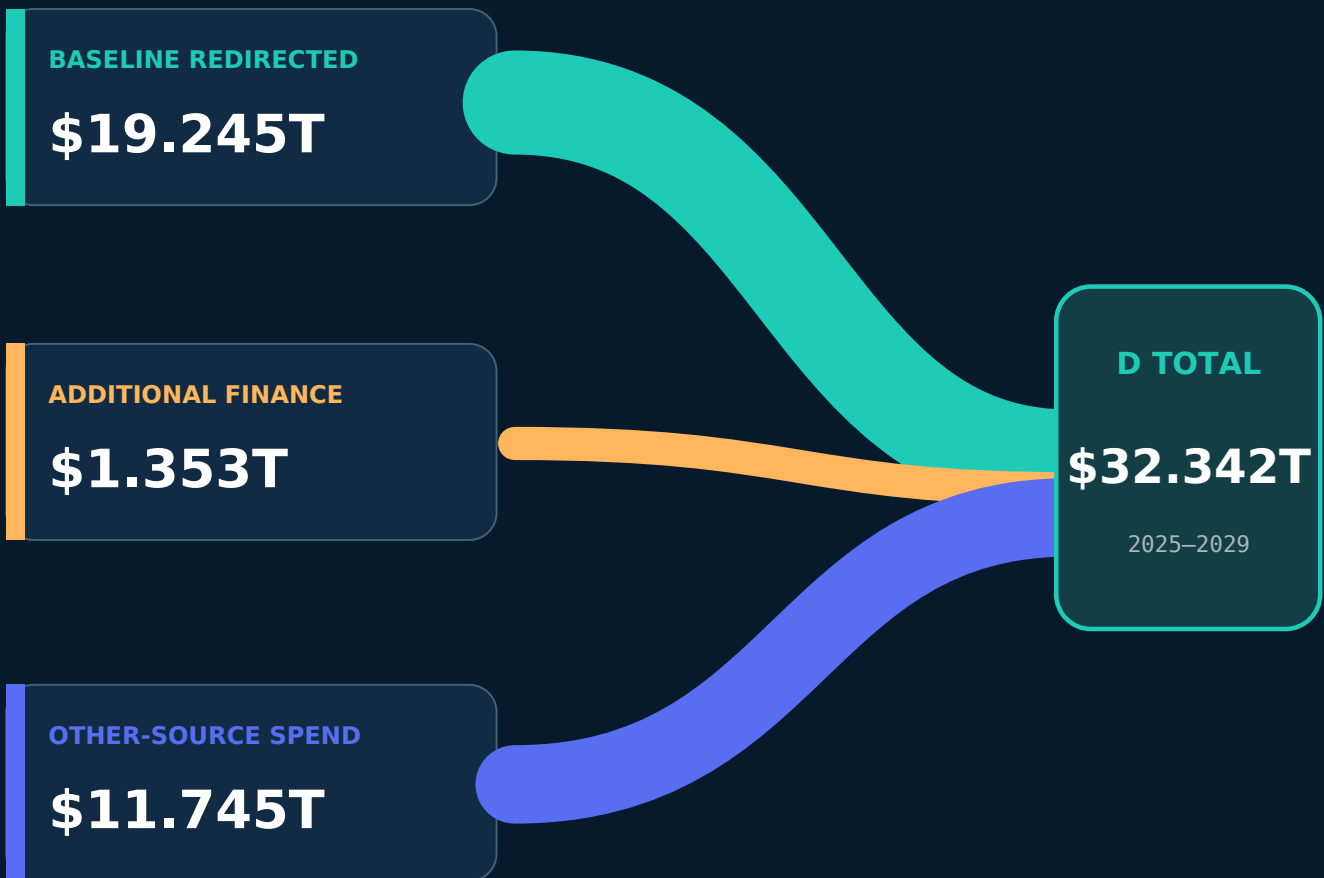


SHARES DESCRIBE WHO ULTIMATELY PAYS — NOT FIVE EXTRA COSTS

Tile areas approximately reflect the five reported shares; rounded dollar cells total \$5,278.5B. Sponsorship and provider-payment categories cannot be added twice.

Re-route the funds; don't count them twice.

Five-year Scenario D funding channels represent the same \$32.342T national cost.



THREE FUNDING CHANNELS, ONE \$32.342T TOTAL

DISPLAYED CHANNELS ARE INDEPENDENTLY ROUNDED

These are funding allocations within the D total, not extra costs to add to it. The \$0.001T visible discrepancy is rounding of component displays.

Part III — Demand, screening and health value

Chapter 10 — Unmet care, benefit exposure, and deferred demand

The demand inquiry proceeded from policy eligibility through actual potential utilization. Simply counting uninsured residents, adults behind on screening, or people with dental need does not establish the number who will request and complete additional appointments after reform. Steps 108–112 examined coverage-linked demand, the marginal people gaining benefits, survey-based exposure controls, benefit-specific conditional uptake, and the first deferred-care surge.

The accounting restriction is important: screening, newly accessible chronic care, and deferred treatment may already be represented by the 6% recurring-care provision or the 3% catch-up queue. They cannot be added a second time as fresh service costs without first replacing or reconciling the corresponding aggregate component.

What the recovered Step 107 actually measures

The October 25 original Step 107 JSON contains **30 canonical event-family definitions, four policy scenarios, 30 annual periods** and exactly **3,600 materialized scenario-year-family positions**. The register also supports seven age bands, six historical coverage groups and 28 compatible age/coverage pairs. Its 100,800 more granular addresses are virtual join combinations, not national patient records.

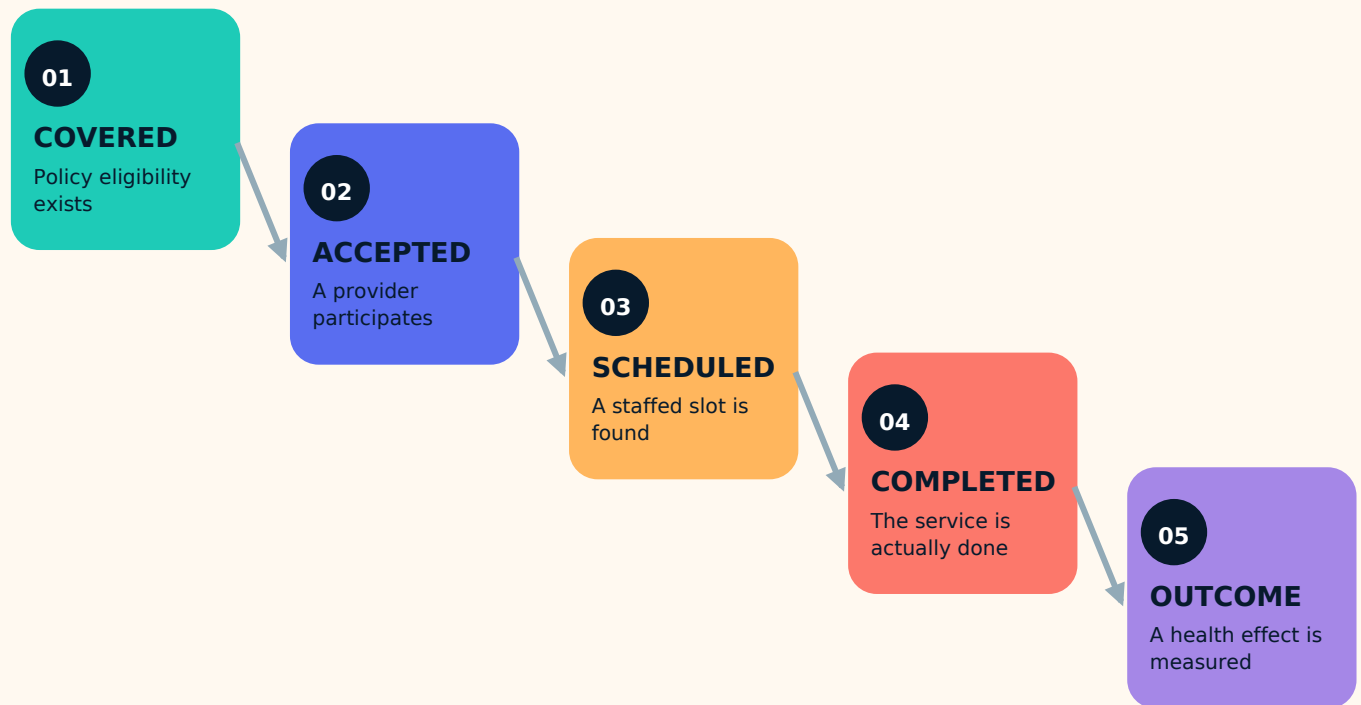
The crucial fields for 2025–2054 `total_requested_due_events`, `staffed_capacity_completable_events` and `completed_events` remain **null**. The historical 2024 MEPS/coverage reconciliations are retained, but future event counts are not quantified by simply having an event-family key. The demand gate is still `HISTORICAL_BASELINE_INTEGRATED_PHASE2_QUANTIFICATION_OPEN`.

The separate Steps 108–112 address coverage-linked experience and hypothetical marginal-service requests. A survey no-use rate and an unmet clinical need are different from an appointment already requested. New detection may increase the number of medically indicated events. `completed=min(clinically valid requests plus due backlog, staffed capacity)` is a structural conservation concept, not a current nationally measured completion number. Accordingly, neither a 3,600-position ledger nor a dollar-denominated deferred-care queue certifies actual new provider throughput.

Direct source references: AHRQ, Medical Expenditure Panel Survey; U.S. Census Bureau, population characteristics. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

Coverage is only the first step toward care.

A person can hold a benefit without finding a staffed clinical appointment.



3,600

SCENARIO x YEAR x EVENT-FAMILY POSITIONS

REQUESTS

UNMEASURED

STAFFED HOURS

UNMEASURED

COMPLETIONS

UNMEASURED

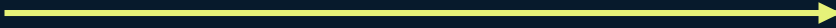
3,600 SCENARIO POSITIONS

0 VERIFIED FUTURE SERVICE COUNTS

The Step 107 register defines data positions, not patient records. National requested events, staffed capacity and completed care remain unmeasured.

Catch-up demand arrives before capacity is proven.

The modeled \$0.530T queue is deferred expenditure, not patients or booked appointments.

2025  ~2036

~\$0.530

TRILLION DEFERRED SPENDING

SIMULATED PEAK 2030

6%

ONGOING NEW CARE

1%

CAPACITY INVESTMENT

3%

BASELINE SPEND/YR CEILING

The queue clears only under assumed throughput and staffing. Its dollar profile does not tell us how many people can obtain clinically necessary care.

Chapter 11 — Provider networks, clinical workforce, and real treatment capacity

Moving to one primary public payer could eliminate the need for a covered patient to identify doctors who accept that particular private insurance plan, insofar as those clinicians participate in the universal arrangement. Removing a matching constraint is substantively different from increasing physically staffed treatment slots. Both matter for access, but one cannot be converted into a national percentage increase in appointment supply without observed vacancy and throughput evidence.

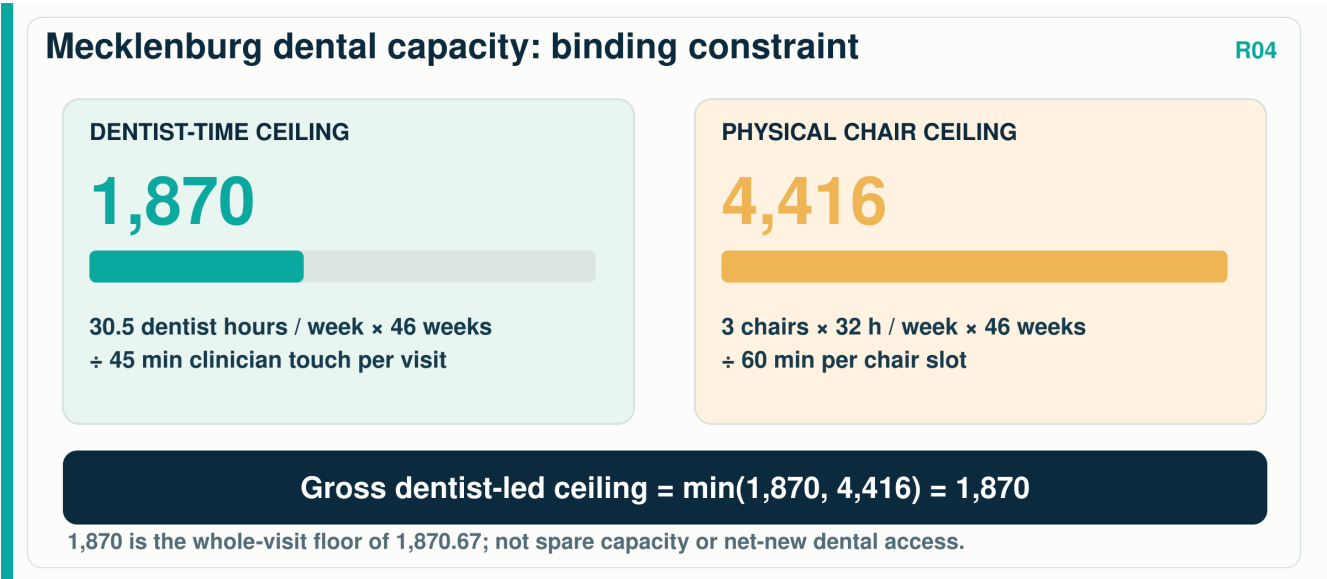


Figure S09 | R04: Mecklenburg dental capacity: binding constraint Hypothetical gross visits; not measured new Mecklenburg appointment capacity.

Steps 113-114 linked regional professional counts to staffed-hour concepts and exposed why clinician headcounts and nominal equipment do not prove clinical completion capacity. Steps 115-117 tested the problem against a Mecklenburg County dental program. County funding, facility descriptions, and eligibility were documented, but service hours, mobile-only annual completed appointments, displaced baseline work, program waitlists, and referral completion were unavailable. An aggregate data request was prepared and not sent. No national or even county incremental appointment result was certified from that example.

The high-level 2029 national scale comparison holds the established 6% recurring-care allowance, 3% catch-up limit, and 1% investment allowance **unchanged**. Added dollars do not measure completed care; provider participation, staffing, geographic distribution, and reserve capacity remain implementation-validation requirements.

From workforce counts to staffed clinical slots

Step 113 began with **3,235 county-equivalent HRSA records**, narrowing to **3,135 comparable county records** for the visual’s category calculations; these are not interchangeable denominators. Connecticut’s overlapping county vintages were withheld from normalized workforce rates rather than falsely joined. The narrow HRSA/BLS workforce categories displayed in the accompanying visual do not establish that residents lack healthcare or cannot obtain cross-county care.

At the Mecklenburg County pediatric mobile dental pilot, a reported **three-chair** vehicle with a full-time dentist and hygienist was documented. Under explicit hypothetical, not observed, 30.5

weekly dentist-treatment hours, 46 annual working weeks and 45 dentist-touch minutes, the arithmetic is only **1,870 gross dentist-led visit equivalents per year**, versus an assumed three-chair physical ceiling of 4,416. The smallest resource may bind before nominal chair capacity, and neither figure measures net-new completed county visits because pre-existing duties and travel hours are unknown.

The workflow is constrained by actual clinical FTE hours, service duration, acceptance and already committed workload, plus assistants, diagnostic equipment and geographic access. Staffed appointments, follow-up, emergency reserve and existing patients take precedence over theoretical intake demand. The local dental pilot demonstrates what evidence an implementation analysis needs; its numbers have **not** been scaled into a national completion forecast or booked as 30-year financial savings.

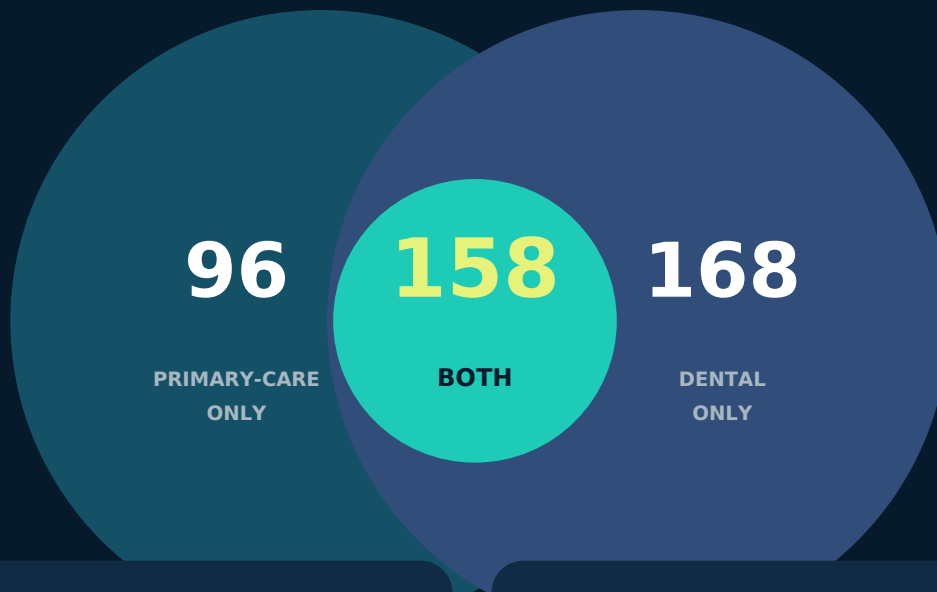
Direct source references: HRSA, Area Health Resources Files; BLS, Occupational Employment and Wage Statistics; Mecklenburg Public Health Mobile Dental Unit. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

Access depends on where clinicians are.

Regional workforce records expose why one insurance card cannot guarantee appointments.

3,135

COMPARABLE COUNTY RECORDS



254

**ZERO DEFINED PRIMARY-CARE
PHYSICIAN RECORDS**

326

**ZERO ACTIVE DENTIST
RECORDS**

2,713 RECORDS ARE IN NEITHER ZERO CATEGORY

The circles are schematic; no percentages imply no actual care.

These are zero entries under narrow workforce definitions, not counties without healthcare. Telehealth, cross-county care and other professionals are excluded.

Chapter 12 — Prevention, screening, earlier detection, and follow-up

The early-detection program is a principal proposed benefit, but its useful outputs have different units: eligible people, people newly up to date, screening tests, diagnostic follow-ups, identified disease, completed treatment, and eventual clinical outcomes. Steps 122–124 use 2025 Census cohorts and historical CDC screening percentages to size illustrative changes in colorectal, breast, and cervical screening; those are cross-year sensitivities, not observed 2025 completions.

The colorectal study keeps FIT-first and all-direct-colonoscopy pathways mutually exclusive and separately accounts for positive-FIT diagnostic follow-up. Breast-screening estimates distinguish new entrants from two-year repeat mammograms. Cervical demographic counts are ceilings until clinical exclusions and testing interval are resolved. National mammography and colonoscopy output volumes are workload comparators, not unused staffed capacity.

Step 124 created a five-year **nonmonetary** schedule but did not insert it into the original Step 107 canonical event register (now recovered). No newly measured clinical offset, extra appointment supply, or cost posting follows from these headcounts. Early diagnosis may have substantial value, while its aggregate net financial effect remains unknown.

New recovered evidence: Step 107’s original JSON is now present and verified. It holds the exact `imaging_exam`, `lab_completed_assay`, `outpatient_procedure`, `pathology_report`, and `navigation_case_contact` family keys and all 3,600 scenario-year-family positions. It does **not** hold quantified future national completions, and Step 124’s scheduled screening counts remain unmerged. Appendix H records precise join candidates and boundaries.

Nonmonetary screening schedule and referral sequence

The screening scenario schedules are **demand pressures**, not completed care or newly available appointments. A historical U.S. estimate of **15.475M annual colonoscopies** is a scale comparator, not spare clinical capacity. Positive screens require diagnostic callback, pathology and follow-up decisions before an outcome can be claimed; no national incremental treatment slots or disease-stage shift was verified.

With the recovered Step 107 canonical IDs, FIT assays may be directed to `lab_completed_assay`, completed mammograms to `imaging_exam`, completed colonoscopy to `outpatient_procedure`, a distinct pathology report to `pathology_report`, and a truly performed navigation contact to `navigation_case_contact`. This is a **semantic crosswalk only**: Step 124 was not physically posted into Step 107, and none of the ledger’s null national completion or cost fields were filled. Appendix H retains the detailed schedule.

Direct source references: FDA, MQSA national mammography statistics; USPSTF breast cancer screening recommendations; Peery et al., U.S. colonoscopy utilization publication. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

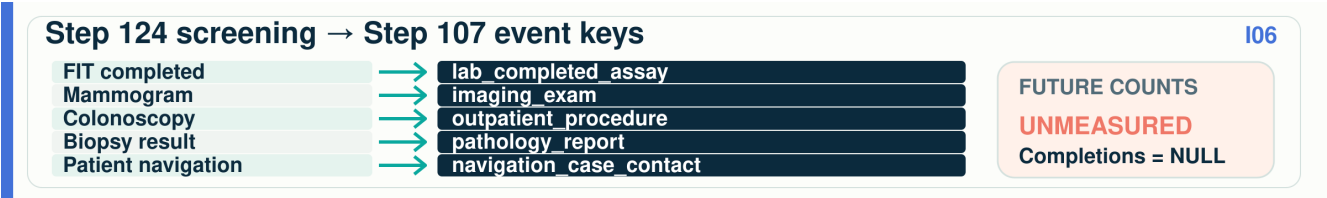


Figure S10 | I06: Step 124 screening → Step 107 event keys Candidate event keys only; Step 107 future completions remain null.

A screening test is the beginning of a care path.

Colorectal and breast-screening demand must connect to diagnostic follow-through.

COLORECTAL CATCH-UP / ANNUAL

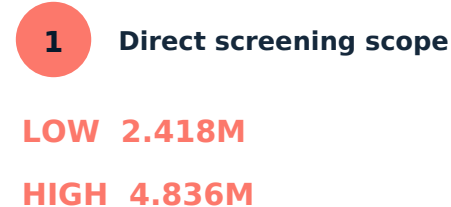
LOW 2.418M

HIGH 4.836M

FIT-FIRST



DIRECT COLONOSCOPY



This is an alternative strategy, not an add-on to every FIT test.

BREAST SCREENING - YEAR-FIVE ADDED WORKLOAD

LOW 4.350M

HIGH 7.171M

45.084M OBSERVED ANNUAL TOTAL MAMMOGRAMS = USE, NOT UNUSED CAPACITY

Low and high are alternative modeled demand scenarios, not ratios. Screening tests, diagnosis and treatment are separate clinical workloads.

Chapter 13 — Population health, disability, medical debt, and social value

The policy may be worth supporting even if it requires increased national health expenditure. Relevant welfare outcomes include improved health, avoided disability, functional independence, mental health, financial resilience, and reductions in the disruption imposed by illness on families. The existing research deliberately separates those questions from cash savings.

Medical debt and bankruptcy calculations use source years and overlapping survey contributors carefully. An illness-associated bankruptcy is not automatically preventable by paying a medical bill, and debt discharge is not a newly saved annual medical resource. The research retained illustrative bankruptcy-prevention sensitivities but did not certify nationwide causal counts or monetize debt face value as public savings.

Health-value threshold is not an achieved outcome

The revised central D–A model remains a **conditional payment/expenditure difference**, not a measurement of forgone or created labor and clinical resources. Its accompanying health-value visual presents break-even requirements, not evidence that the system generates any particular number of QALYs; these thresholds do not transfer to the deeper pricing scenarios.

Transfer-payment versus real resource-value accounting matters here: a reduction in provider allowed reimbursement may change who receives income without equal productive-resource savings. A rigorous social evaluation must reconstruct **real incremental inputs and health outcomes** separately from recorded NHE payments, avoid valuing an insurance transfer as a productivity improvement, and include separate financial-security and distributional outcomes where credibly estimated.

Medical debt, bankruptcy, delayed work and disability form meaningful household harm channels but have overlapping causes. A bankruptcy associated with an illness or a large medical bill is not automatically prevented by insurance redesign; a debt principal that disappears from one balance sheet is not necessarily recovered national healthcare consumption. The report preserves the source rates and calculations as sensitivities while crediting no unsupported national causal benefits.

Direct source references: CBO, preventive care budgetary methodology; U.S. Courts, bankruptcy statistics. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

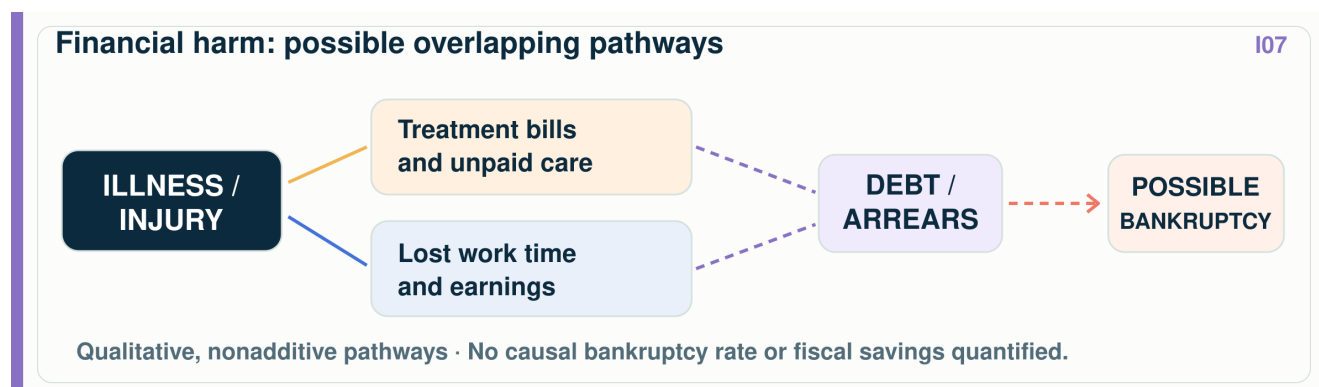


Figure S11 | I07: Financial harm: possible overlapping pathways Financial-harm pathways overlap and cannot all be attributed independently.

How much health benefit would justify the cost?

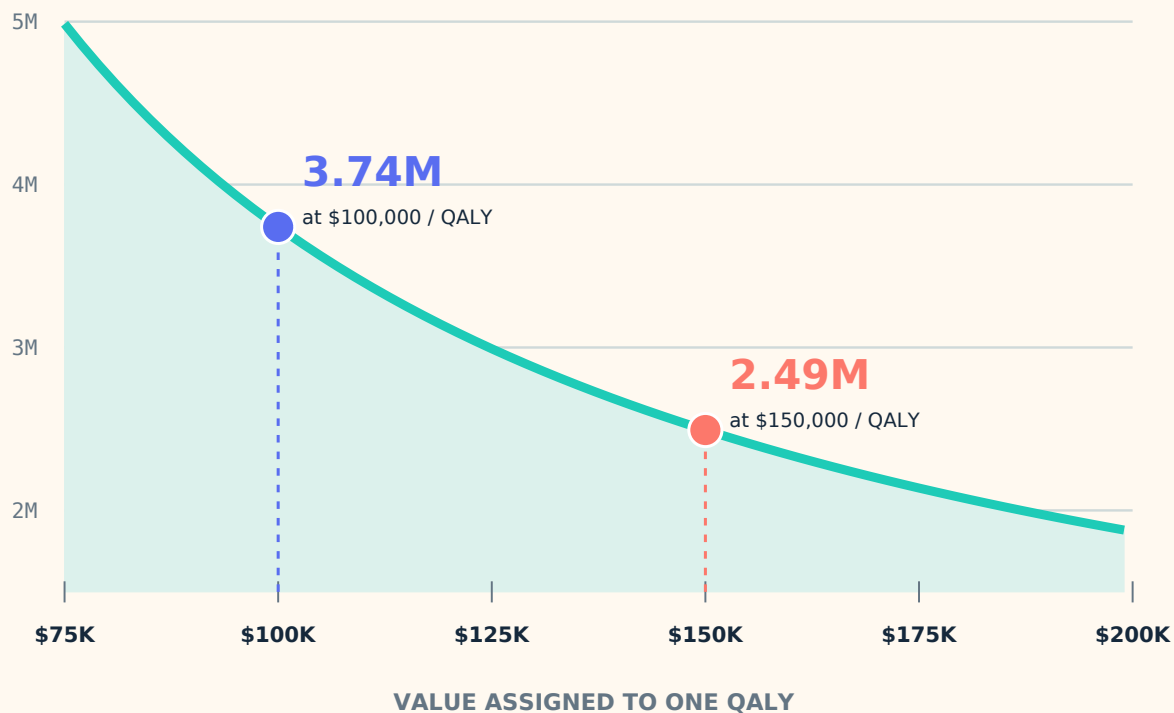
The limited-price middle model supplies a value threshold, not proven health gains.

\$374B

ILLUSTRATIVE EQUIVALENT ANNUAL COST

\$7.551T IN 2025 PRESENT VALUE

ANNUAL QALYs REQUIRED TO OFFSET THE MODELED COST



HEALTH IMPROVEMENTS ARE A REQUIREMENT, NOT A MEASURED RESULT

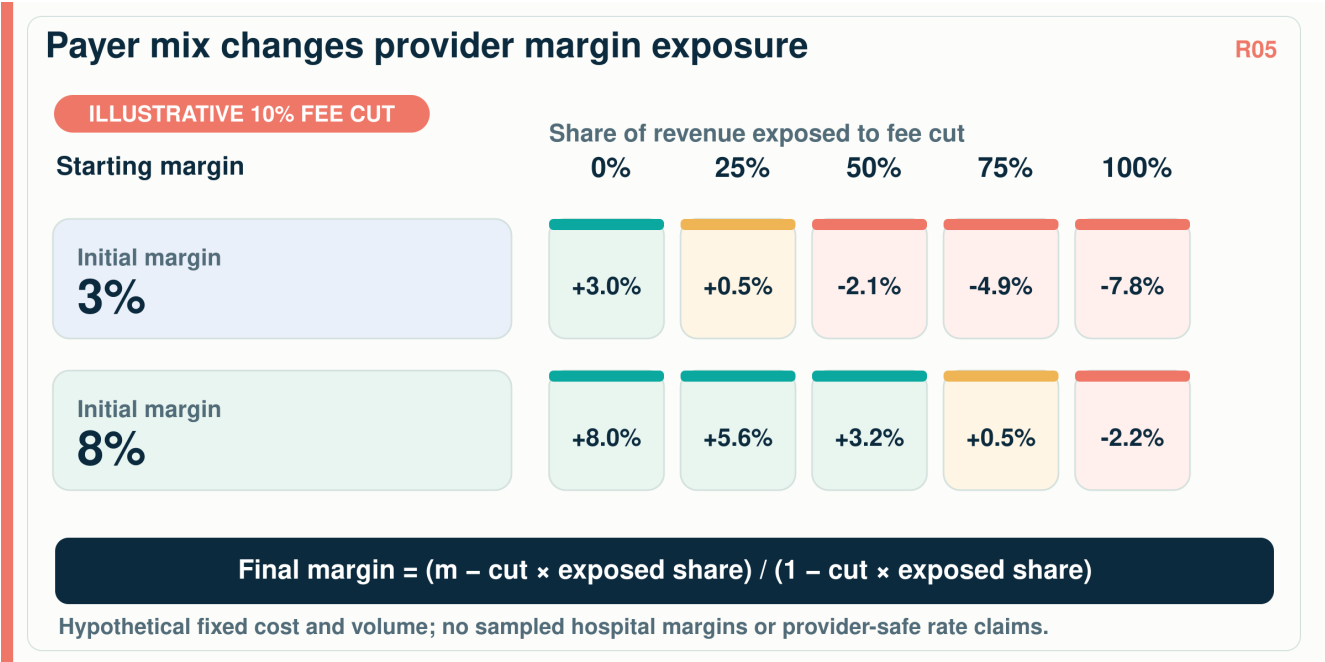
Earlier diagnosis, reduced medical debt and disability avoided still require outcome evidence.

These QALY thresholds depend on the selected \$15.681T nominal model gap, discounting and illustrative values per QALY. No achieved national QALYs were measured.

Part IV — Provider economics and feasibility

Chapter 14 — Provider economics and protection of essential services

The retained viability work tests protections for fractions of affected commercial hospital payment dollars and then compares the national cost of restoring those payments. More ambitious Medicare-multiple sensitivities add an illustrative targeted provider support variable *S*, which changes the break-even point materially. A support amount cannot be invented from the positive shortfalls of unrelated public DRG files or added over existing retained teaching and safety-net payments without reconciliation.



revenue or aid, so it is a stress screen, not a provider forecast.

MedPAC reported roughly **6.5% all-payer operating margins** for 2024 IPPS hospitals and **-12.1% Medicare fee-for-service margins** with different payment definitions. One cannot subtract either percentage from a different CMS nationwide payment category and declare a national viable Medicare multiple. Critical access, high Medicaid load, teaching, uncompensated services, stand-by emergency needs and regional practice scarcity may require differentiated payment protections.

The modeled comprehensive price cases include an **assumed** \$25B-equivalent support amount; the matched hospital cost-proxy test did **not** validate that amount. Dental care, behavioral health, home support, ambulance services, pharmacy and long-term personal assistance each require their own service/unit benchmarks. A tariff that saves payments but eliminates necessary facilities is inconsistent with the coverage promise.

Direct source references: MedPAC, March 2026 inpatient and outpatient hospital payment policy; CMS, hospital cost reports. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

Ten percent less can mean 43% more cases.

An illustrative practice: \$6M fixed costs, \$600 variable costs per case.

\$900

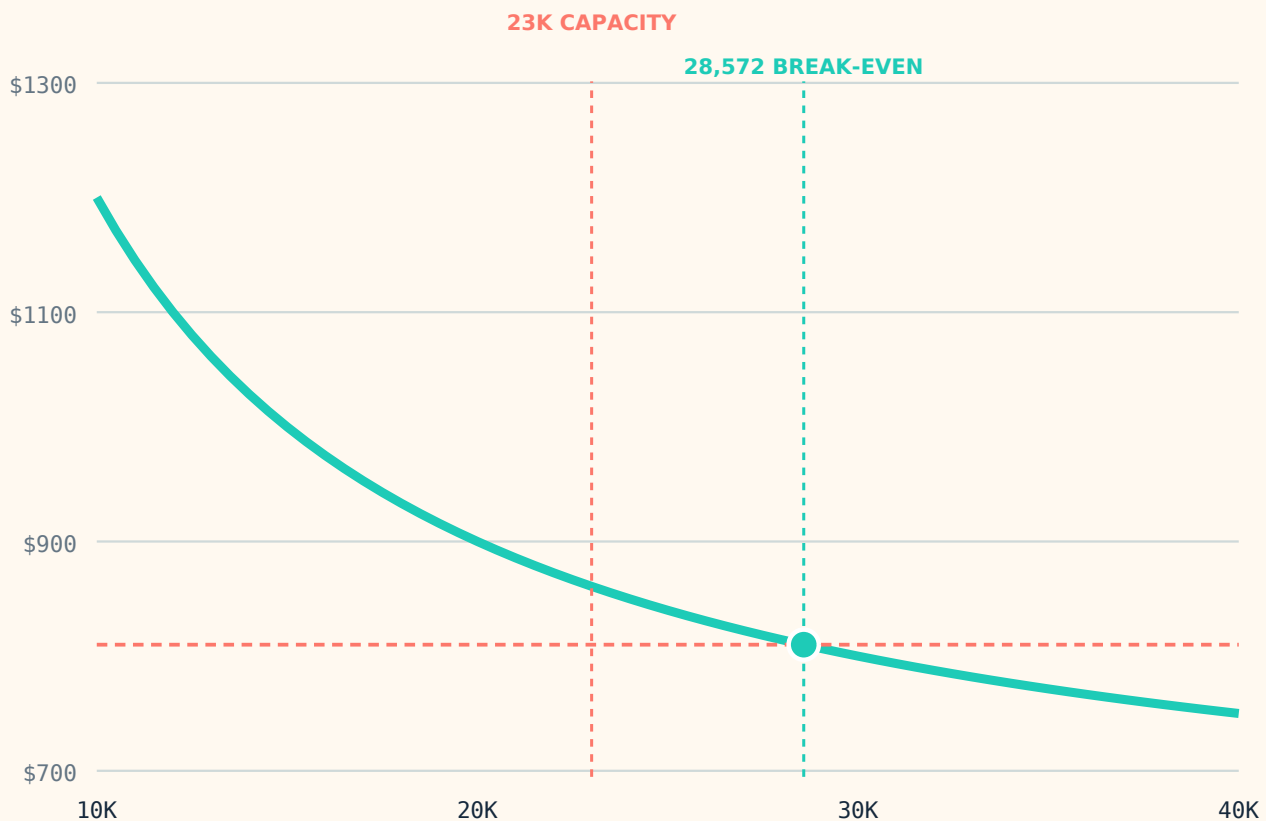
OLD PAYMENT

\$810

NEW PAYMENT

\$210

NEW CONTRIBUTION



MAXIMUM 23,000 CASES

-\$1.17M OPERATING RESULT

SOURCE: REQUIRED RATE = \$600 + \$6M ÷ ANNUAL CASES

The 28,572-case break-even exceeds staffed capacity in this illustration. The example is a stress test, not an observed national payment rate or a closure forecast.

Chapter 15 — Matched federal inpatient data and hospital cohort audit

The retained hospital evidence joins CMS 2024 public hospital-by-DRG payment records to 2023 cost-report information by CMS certification number. The matching covers 145,586 usable published DRG rows, 4,944,875 published discharges, and 2,882 matched IPPS hospitals. The estimated treatment cost is a **proxy** formed from published charges and the hospital-wide prior-year cost-to-charge ratio, not an audited service-specific 2024 cost.

At a hypothetical 135% of observed Medicare total payment, the base proxy found approximately 6.41% of matched published discharges below estimated proxy cost and \$1.240B in gross positive DRG shortfalls. Increasing the uncertain cost proxy by 10% or 20% substantially changes the exposed share and amount. Those positive gross shortfalls cannot be simply extrapolated to national commercial conversion costs or added as an independently verified stabilization pool.

The follow-up cohort review found weaker patient-service margins in the highest reported Medicaid-day quartile than among lower-load hospitals, even when narrow DRG proxy exposure was closer. The original cost-report rural/urban label was corrected to a physical-location classification. Critical access and many other rural settings remain outside the sample; the matched IPPS result does not certify full-service provider safety.

Matched inpatient evidence and external-validity limits

The matched inpatient cost exercise is not a validated national provider-support budget. Its cost-proxy sensitivities at $\pm 10\%$ and $\pm 20\%$ cannot be extrapolated to commercial encounters, ambulatory care, dental services, or the other benefit categories omitted from the public IPPS sample.

The original cost-report rural/urban field was found to be unsuitable for a physical location claim and corrected. Later payer-load stratification reported weaker operating/service margins in the highest Medicaid-day quartile than in lower-load cohorts, while selected-DRG shortfalls alone did not capture the entire economic risk. The source-mismatch and limited IPPS sample are **core constraints** on any proposed national hospital tariff.

Direct source references: CMS 2024 Medicare inpatient hospital provider and service data; CMS 2023 hospital provider cost report. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.



Figure S13 | I08: 2024 inpatient data + 2023 cost reports The matched IPPS sample excludes non-IPPS and other care settings.

Provider survival needs cost-matched evidence.

At a hypothetical 135% of observed Medicare payment, inpatient costs remain uncertain.

2,882

IPPS HOSPITALS

145,586

PUBLISHED DRG ROWS

4.945M

SAMPLED DISCHARGES

6.41%

ESTIMATED PROXY-UNDER-COST DISCHARGE EXPOSURE



93.59% not flagged by this proxy

Not an observed national loss rate

\$1.240B

SELECTED-DRG PROXY SHORTFALL

Not a measured universal provider-support requirement

The proxy joins 2023 hospital cost-to-charge ratios to published 2024 inpatient DRG claims. It excludes other service lines and does not certify safe national payment rates.

Chapter 16 — Sensitivity comparisons and the limits of prediction

The study has several legitimately different mathematical sensitivity families: the historical whole-NHE repricing assumptions; CMS-service-specific limited cuts; alternative net administration reductions; fuller Medicare-reference hospital and professional rates; provider-protection support pools; household sponsorship allocations; and conditional early screening and bankruptcy outcomes. Each varies a different hypothesis and may use a different underlying sample or denominator.

The +\$15.681T limited-price thirty-year increment is retained as its narrowly specified reference case. Later four-source mixed hospital/professional payment comparisons and additional support-pool tests demonstrate the possible direction and magnitude of deeper price reform, but do not form a statistical confidence band. The national model’s sign can reverse, yet clinical access and the ability to finance providers must be established independently.

This report never stacks alternative assumptions as though they are cumulative savings, interprets payment reductions as equal real resource efficiencies, or labels model-year values predictions for legislation that has not been written.

Comparison control: The deeper-pricing examples previously reported in Document 2 differ by a few billion dollars when recalculated using rounded, partly nonmatching published input ratios. Appendix F shows both versions, explicit differences and source-compatibility limitations. The four rows are sensitivity illustrations, never statistical confidence bounds.

Distinct sensitivity families, not one statistical range

The superseded +\$9.440T model, earlier optimistic –\$18.345T scenario, and withdrawn roughly +\$0.155T blended-hospital construction remain documented in Chapter 19 and Appendix L; none is a current forecast. The active tariff illustrations shown in the visual do not share a common national claims sample or provider-viability condition. They are not stochastic draws, confidence limits or cumulative savings categories. A regulated reimbursement schedule changes the **payment path**; real resource use still depends on costs, provider supply, quality and utilization responses.

The rounded-source reconstruction has disclosed discrepancies up to about \$3.941B over the nominal 30 years. Without exact intermediate blending inputs, one should not assert those differences are caused solely by rounding. The appendix therefore preserves original and independently reconstructed quantities side-by-side with an explicit unresolved precision/reconciliation status.

Direct source references: MedPAC, March 2026 report; CBO, price regulation choices. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

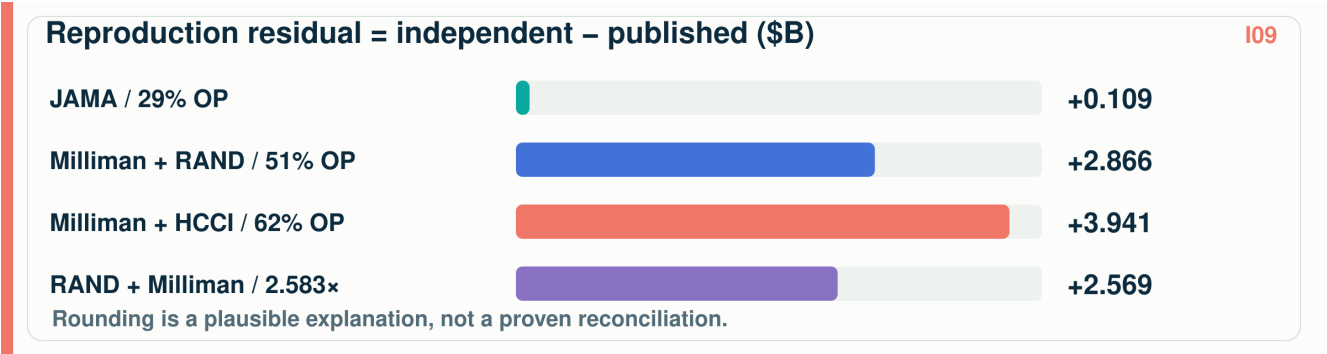
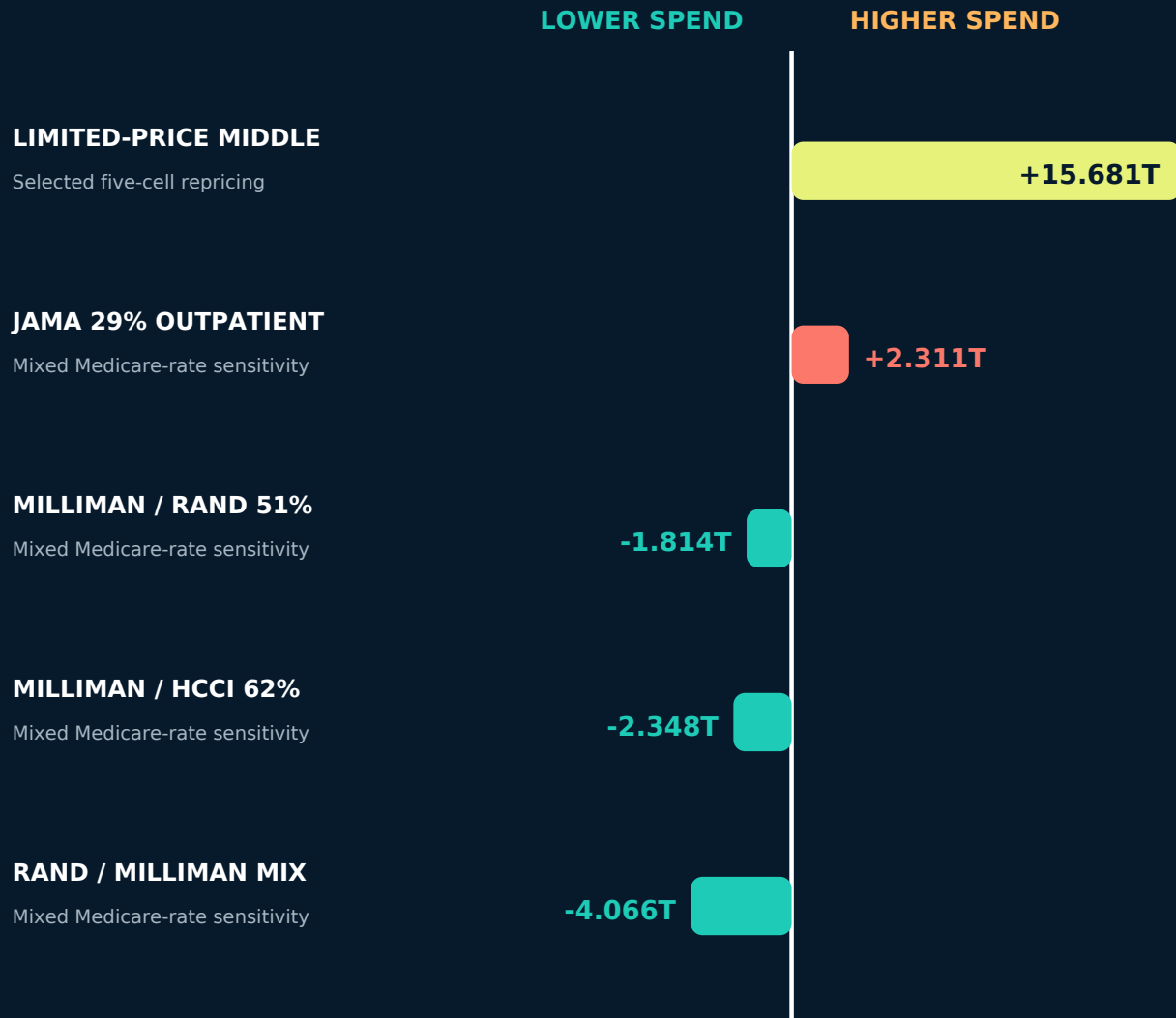


Figure S14 | I09: Recalculation difference relative to Document 2 (\$B) Local recalculation minus prior Document 2 example; cause not fully resolved.

Modeled price changes matter.

Mixed-source Medicare price illustrations; no validated national savings.



ILLUSTRATIVE RATE COMPARISONS - NOT VERIFIED NATIONAL SAVINGS

The four deep-price cases mix different source populations, assumed provider support and reported-versus-recomputed residuals. No case verifies a safe national tariff.

Chapter 17 — Integrated conceptual feasibility judgment

The present evidence supports a coherent national-policy hypothesis: broadly covered medically necessary services, one primary public payer, independent delivery, no covered-care point-of-service bills, and common service-specific reimbursement subject to adequate provider safeguards. The completed conceptual exercise also establishes a defensible national historical accounting basis and multiple conditional financing and pricing comparisons.

It does not support a claim of guaranteed national cash savings, provider-safe universal tariff levels, validated nationwide additional staffed slots, an enforceable collection and claims-transfer mechanism, or measured incremental national QALYs sufficient to satisfy a selected societal-value threshold. Positive welfare may justify expenditure even where net national spending grows; lower reimbursement alone is not evidence that an economy uses fewer physical resources.

Conditional decision and the four go/no-go gates

The decision gates remain four independent evidence categories. Beyond the three operational checkpoints pictured in the visual—**payment, capacity and financing**—the fourth is measured improvement in health, functioning, disability outcomes and financial protection without overlap with monetary care-system reductions. These gates are not new tasks inside this closed conceptual research phase.

Universal benefits, no covered-care copays and clinically effective early detection remain essential to the tested concept. None is to be silently removed to manufacture savings. Conversely, substantive social value can potentially justify a higher national healthcare payment bill; evaluating that is different from falsely declaring a negative cost by reclassifying money transfers as resource efficiencies.

Direct source references: CMS NHE, funding and spending data. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

Coverage is not the same as delivery readiness.

Three implementation tests remain independent of the hypothetical 2029 phase-in.



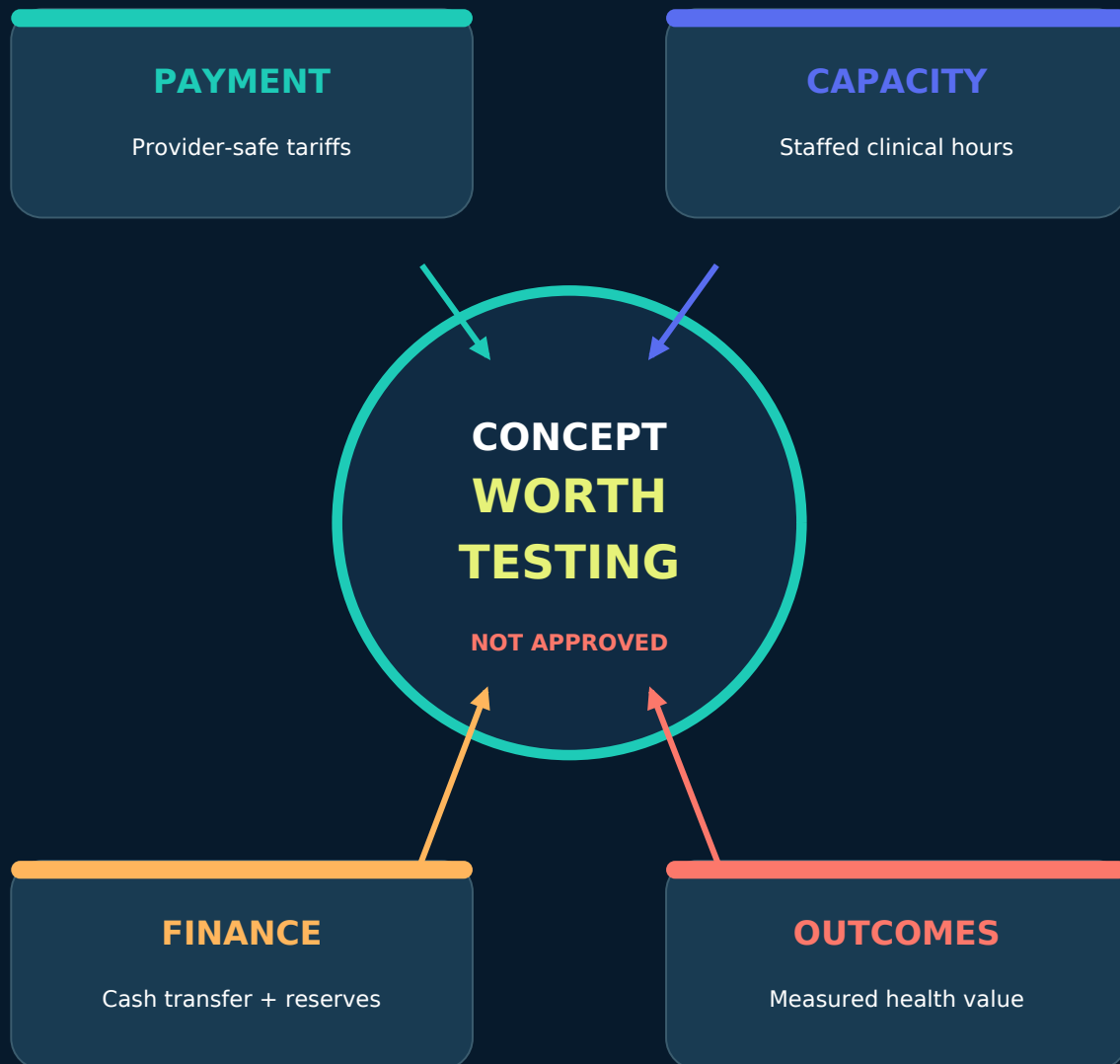
100% ELIGIBILITY DOES NOT EQUAL AN APPROVED NATIONAL LAUNCH

Payment, staffed care and transfer accounting require independent evidence.

Coverage eligibility can reach 100% in the model without proving staffed care, safe reimbursement or on-time collection of sponsor funds.

The idea merits testing. The rollout is unproven.

The next decision is whether evidence can validate four separate national constraints.



CURRENT FINANCIAL MODEL:

+\$15.681T

30-YEAR D MINUS A; RESTRICTED PRICING CASE

Conceptual feasibility does not certify safe nationwide launch. Payment, capacity, financing and measured outcomes must each pass evidence-first validation.

Part V — Reconciliation and source controls

Chapter 18 — The research chronology and retained project evidence

The study progressed from population and coverage definitions into benefit-specific demand, the national scenario model, service/payer denominator correction, nonprice savings, screening capacity, financing, provider economics, and matched hospital records. The detailed step documentation preserved below is important evidence of what was asked, what the source actually showed, what remained hypothetical, and how successive model choices changed.

Steps 108–117 establish exposure, uptake, local workforce limitations, and one illustrative dental capacity case; Steps 118–121 correct pricing denominators and separate administration from clinical claims; Steps 122–124 quantify bounded screening-population and procedure-workload scenarios. The consolidated October 26 record then integrates financing, health-value thresholds, deeper pricing sensitivities, and the inpatient cost-proxy audits.

Earlier Steps 1–106 are represented indirectly in the consolidated record; the original Step 107 JSON is now recovered and validated. It contains all 3,600 event-family positions but no filled future completion or price forecast. The line between historical claims, a recovered structural ledger, and independently reconstructed financial quantities stays visible.

Documentary correction: The original Step 107 4,508,842-byte JSON was recovered from the research file inventory on October 27. Earlier Step 124’s ‘unavailable source’ claim is preserved only in the historical archive; it no longer describes the present source inventory. Step 107’s numerical forecasting gate nevertheless remains open.

Methodology chronology and source availability status

The work’s early sequence established U.S. population/coverage group definitions and the 26 benefits, built a 30-event-family and four-scenario schema, then introduced a 30-year national model and workforce/demand sensitivity tests. **Step 107** (prepared October 25) is now physically recovered, with verified exact keys and null future service counts; Steps 108–124 form subsequent source-specific reports. On October 26 the consolidated analysis brought in service/payer matrix corrections, broadened Medicare-reference pricing, marginal financing and matched public hospital cost screens.

The original early research Steps 1–106 and full Step 48 execution source remain **not completely materialized in this dossier**; the later consolidated document reports their outcomes but does not substitute for an audit of all their original bytes. The revised file inventory now includes the full locally held Step 110–116 JSON audit/contract assets and Step 117 unsent aggregate request, separately from the narrative step reports. The recovered Step 107 is thus a corrected documentary gap, not a retroactive claim that every early computation has been independently recertified.

Appendix N preserves the original numbered October 26 source analyses and Steps 108–124 in historical wording. The consolidated source’s earlier executive preface is also retained as N.0. A reader should use current chapters and Appendices A–M/O for final interpretations while treating archived prospective ‘next step’ directions as history, not instructions to resume the research.

Direct source references: HRSA provider geography and shortage areas; FDA national screening procedural comparison. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

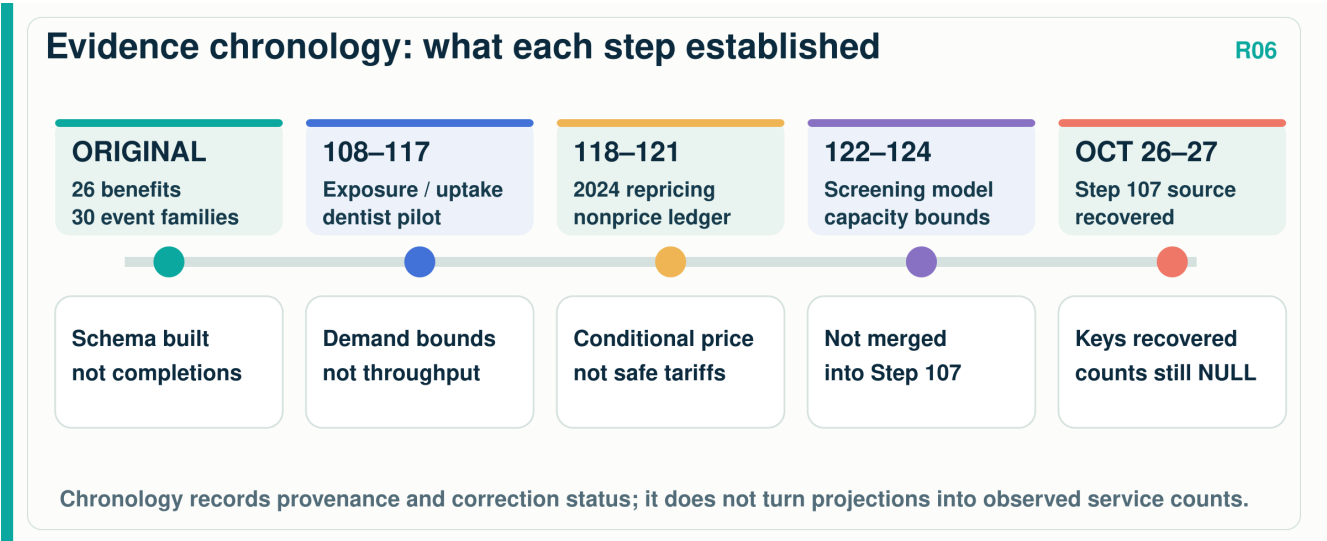


Figure S15 | R06: Evidence chronology: what each step established Research sequence and the recovered Step 107 documentary correction.

Chapter 19 — Superseded claims, corrections, and analytical reconciliation

A correction is evidence of improving method, provided it is made explicit. The historical provisional base reported approximately +\$9.440T in thirty-year D less A under an assumed 45% eligible repricing share; an optimistic scenario reported approximately -\$18.345T, dependent on unvalidated broad price and clinical offsets. The later observed service/payer reconciliation replaced those as defensible central figures. A subsequent approximately +\$0.155T blended-hospital near-break-even construction was withdrawn because the source ratios and payment denominators did not match.

The corrected limited-price middle result, approximately +\$15.681T, remains useful only for its actual assumptions. The comprehensive-price tests demonstrated that this relatively mild case could not be used as a general verdict on government-set medical prices. The hospital analysis also corrected a misleading rural/urban classification and kept unlike financial margin definitions separate.

Earlier charts, provisional spreadsheets, and sensitivity rows are retained with dated status and traceability. No withdrawn figure is quietly republished as a current forecast and no independent national health benefit is invented to force a favorable result.

Numerical control: The older headline +\$15.681268792T results from a rounded-control \$86.1128B annual price assumption. The five-cell exact result is +\$15.681257966T, approximately **\$10.826M lower**. Neither affects the three-decimal figures on Documents 1 and 2. The abandoned 45%-all-NHE and blended-hospital cases remain superseded/withdrawn.

Correction ledger and defensible publication claims

The authoritative current limited middle pricing row computes **\$86.11297B** from the five underlying 2024 payer/service cells, rather than the previous **\$86.1128B** rounded control. Multiplied by 63.683041276 weighted model-years, the difference moves the cumulative national D–A by about **\$0.000010826T**, or **\$10.826 million**. The exact v3 30-year reference remains **+\$15.681257966T**, which equals +\$15.681T at the shared display precision of Documents 1 and 2.

The historic +\$9.440T and –\$18.345T cases are superseded because their price eligibility and clinical offset assumptions were not established. The roughly +\$0.155T blended-hospital near parity estimate was **withdrawn** due to incompatible reference denominators. Deep-price scenario outputs are permitted as mathematically conditional, while provider safety and source-mix validity remain open.

The original Step 124 statement that Step 107 exact IDs were unavailable has been overtaken by successful recovery; the original note is preserved only in the historical archive. Although exact event keys can now be identified, Step 124’s schedule is **not merged** and no null treatment completions have been promoted to nationally predicted values. These corrections prevent the archive’s older language from being mistaken for current verified results.

Direct source references: CMS historical NHE (corrected denominator). Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

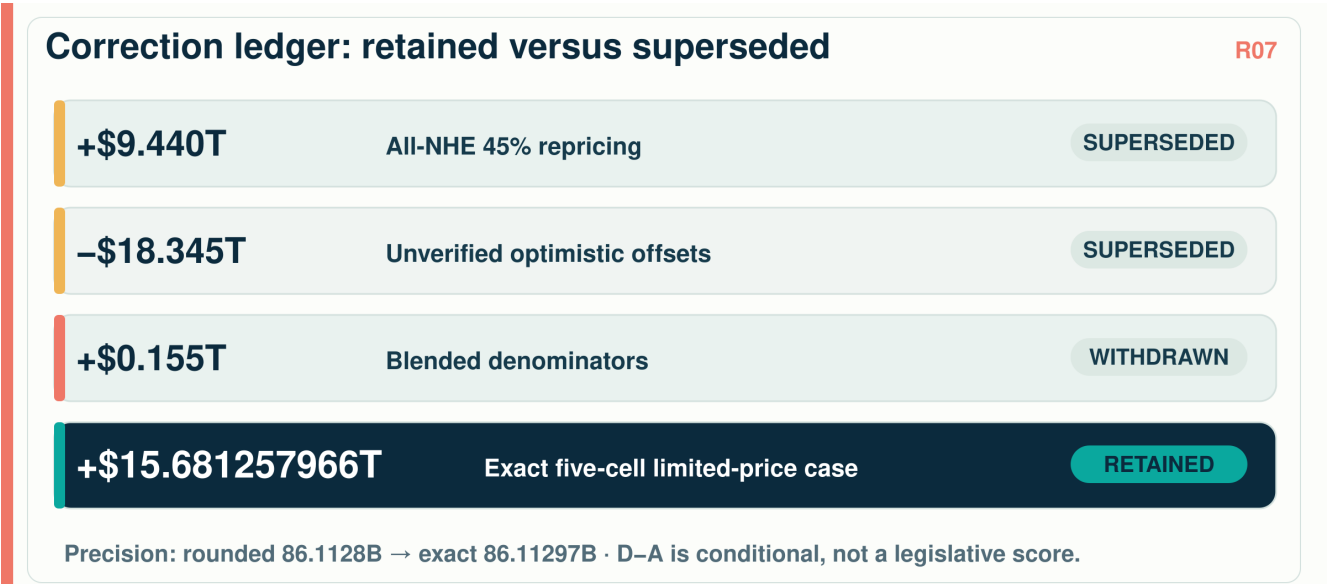


Figure S16 | R07: Correction ledger: retained versus superseded Historical estimates remain visible but not current.

Chapter 20 — Reproducibility, source integrity, and publication controls

Reproduction begins with labeled source observations, years, populations and units. Every derived figure identifies its transformation, scenario assumptions, version and role in the headline finding. This manuscript retains consolidated technical explanations, step reports, the corrected annual reference-case table and the file manifest so reviewers can distinguish historical results from new calculations.

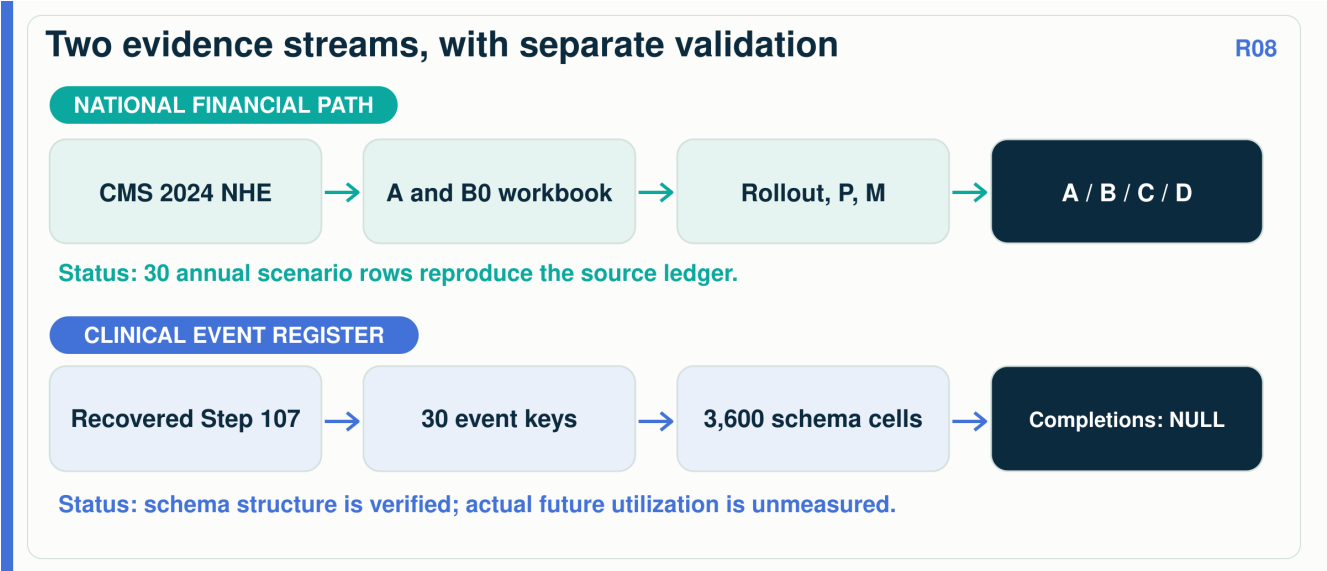


Figure S17 | R08: Two evidence streams, with separate validation Financial and clinical-demand chains have separate validation gates.

Publication must reconcile service cuts to the exact modeled annual-equivalent reduction; inspect source URLs, dates and population comparability; and cross-check the manuscript, one-page executive brief and 32-page conceptual feasibility report. Unresolved differences belong in a visible discrepancy register, never silent edits. A reviewer must be able to reproduce each headline amount.

This is a **working manuscript**, not a signed audit opinion. The underlying policy question remains closed at the conceptual phase while the documentary traceability, typography, and equation checks are completed.

Audit scope: The evidence manifest retains full SHA-256 digests, historical Document 3 v1, available Steps 108–124 and recovered Step 107 JSON. Cross-source cohorts remain unlike a unified national claims file. This styled PDF is a distinct publication deliverable, not an analysis of an implemented policy.

Reproduction, evidence chains and release threshold

For finance, recover the workbook’s 30 Base rows, apply each phase-in fraction to A and B0 in billions, deduct five-cell P=86.11297 and administrative M=70.5832, then sum all four scenarios. For demand, recovered Step 107 JSON has 30 exact family IDs, 120 scenario-years and 3,600 positions with future treatment quantities still null. Both checks are reproducible without relying on prose.

Deep-price examples retain **reported values, reconstructed formulas and residuals**; unpublished source-blending precision remains unavailable. This is **qualified reproduction**, not zero-residual validation. Provider-safe rates, staffed capacity, financing transfers and measured health effects remain conditional. Primary citations accompany chapters and Appendix O.

Appendix M indexes the workbook, reports, audits, manuscripts and earlier PDFs by short identifiers; **Appendix P contains the complete SHA-256 hashes**. Appendix N preserves historical wording and dated instructions. Release also requires visual PDF inspection, functioning links, consistent tables, resolved source-status contradictions and independent substantive peer review before distribution to policy professionals.

Direct source references: CMS, NHE methodology and datasets; MedPAC 2026 Medicare Pay-

ment Policy. Model numbers and hypothetical reductions are **our scenario calculations**, not findings published by these agencies.

Technical Appendices — current computations and source register

Appendix A Full 26-benefit specification

ID	Covered benefit	Status in fiscal model
1	Prevention and screening	Included in policy scope; no separately certified actuarial forecast
2	Vaccinations	Included in policy scope; no separately certified actuarial forecast
3	Primary and chronic care	Included in policy scope; no separately certified actuarial forecast
4	Maternity and reproductive care	Included in policy scope; no separately certified actuarial forecast
5	Pediatric and developmental care	Included in policy scope; no separately certified actuarial forecast
6	Emergency care and transport	Included in policy scope; no separately certified actuarial forecast
7	Specialty consultation	Included in policy scope; no separately certified actuarial forecast
8	Laboratory services	Included in policy scope; no separately certified actuarial forecast
9	Diagnostic imaging	Included in policy scope; no separately certified actuarial forecast
10	Inpatient hospital care	Included in policy scope; no separately certified actuarial forecast
11	Outpatient procedures	Included in policy scope; no separately certified actuarial forecast
12	Oncology	Included in policy scope; no separately certified actuarial forecast
13	Renal replacement and dialysis	Included in policy scope; no separately certified actuarial forecast
14	Prescription medicines	Included in policy scope; no separately certified actuarial forecast

ID	Covered benefit	Status in fiscal model
15	Dental	Included in policy scope; no separately certified actuarial forecast
16	Vision	Included in policy scope; no separately certified actuarial forecast
17	Hearing	Included in policy scope; no separately certified actuarial forecast
18	Mental and behavioral health	Included in policy scope; no separately certified actuarial forecast
19	Substance-use treatment	Included in policy scope; no separately certified actuarial forecast
20	Rehabilitation	Included in policy scope; no separately certified actuarial forecast
21	Durable equipment and assistive devices	Included in policy scope; no separately certified actuarial forecast
22	Home health	Included in policy scope; no separately certified actuarial forecast
23	Long-term and personal care	Included in policy scope; no separately certified actuarial forecast
24	Post-acute skilled nursing	Included in policy scope; no separately certified actuarial forecast
25	Hospice and palliative care	Included in policy scope; no separately certified actuarial forecast
26	Care navigation and social support	Included in policy scope; no separately certified actuarial forecast

Every category is in the intended universal benefit package; **all are not separately costed at the person-service level**. Subcategories map to shared canonical event families, so 26 benefits and 30 event families are **not additive multiplicities**. A price schedule needs independently priced billable units for each clinically distinct service; the current workbook applies aggregate national allowances.

Appendix B Assumption and four-scenario dictionary

Input / rule	Value	Evidence status / limitation
Observed base NHE	2024 \$5,278.588B	CMS observed all-sponsor expenditure, not federal-only budget
Baseline nominal growth Universal phase-in	2025–2034 5.4%; 2035–2054 4.0% 20/40/60/80/100% (2025–2029)	Analyst scenario, not a forecast Assumed share; 100% thereafter

Input / rule	Value	Evidence status / limitation
Additional recurring paid care	6% allowance	Modeled dollar share; not clinical episode count
Additional service capacity investment	1% allowance	Spending input, not validated new staffed slots
Annual catch-up throughput ceiling	3% of baseline	Dollar-flow queue rule; capacity unproven
Limited private hospital fees	–10% on 2024 \$558.936B pool	Conditional example
Limited physician/clinical fees	–5% on 2024 \$505.059B pool	Conditional example
Other three limited fee pools	–2% each	See exact bridge in Appendix D
Net insurer nonmedical reduction	40% of 2024 \$176.458B	After assumed replacement administration; not zero payer overhead
Other unverified financial offsets	\$0 newly credited	Unknown real impact; \$0 credit prevents double-counting
Hospital viability support (deep-price only)	\$25B / weighted 2024-equivalent year	Assumed spending; not a measured required protection

Scenario	Coverage axis	Price axis	Exact v3 computation	Interpretive limitation
A	Existing	Existing	A: workbook existing-system base	2025–2054 simulated
B	Universal	Existing	B0 – net administrative efficiency	Not a pure coverage-only effect ; admin credit included
C	Existing	Regulated	A – service repricing	Uses universal rollout fraction as proxy for price phase-in, despite existing coverage label
D	Universal	Regulated	B0 – net admin – service repricing	Combined reform; no independently priced 26-line forecast

The distinction matters: the labels are useful for the intended two-by-two comparison, but the implemented financial formulas reuse the coverage-rollout fraction for regulatory prices, and put assumed administration savings into B. Those operational modeling shortcuts limit causal interpretation without invalidating the basic conditional D–A arithmetic.

Appendix C Full 30-year national four-scenario expenditure ledger

Year	Phase	A	B	C	D	D–A
2025	20%	5.563644	5.660038	5.545492	5.641886	+0.078241
2026	40%	5.864081	6.067280	5.825815	6.029014	+0.164933

Year	Phase	A	B	C	D	D-A
2027	60%	6.180742	6.501998	6.120243	6.441500	+0.260758
2028	80%	6.514502	6.965974	6.429481	6.880954	+0.366452
2029	100%	6.866285	7.461100	6.754271	7.349086	+0.482801
2030	100%	7.237064	7.863999	7.119001	7.745936	+0.508872
2031	100%	7.627866	8.288655	7.503427	8.164217	+0.536352
2032	100%	8.039770	8.736243	7.908612	8.605085	+0.565314
2033	100%	8.473918	9.208000	8.335677	9.069759	+0.595841
2034	100%	8.931509	9.705232	8.785804	9.559526	+0.628017
2035	100%	9.288770	10.093441	9.137236	9.941907	+0.653138
2036	100%	9.660321	10.271250	9.502726	10.113655	+0.453335
2037	100%	10.046733	10.615664	9.882835	10.451765	+0.405032
2038	100%	10.448603	11.040290	10.278148	10.869836	+0.421233
2039	100%	10.866547	11.481902	10.689274	11.304629	+0.438082
2040	100%	11.301209	11.941178	11.116845	11.756814	+0.455605
2041	100%	11.753257	12.418825	11.561519	12.227087	+0.473830
2042	100%	12.223387	12.915578	12.023980	12.716170	+0.492783
2043	100%	12.712323	13.432201	12.504939	13.224817	+0.512494
2044	100%	13.220816	13.969489	13.005136	13.753810	+0.532994
2045	100%	13.749648	14.528269	13.525342	14.303962	+0.554314
2046	100%	14.299634	15.109400	14.066355	14.876121	+0.576486
2047	100%	14.871620	15.713776	14.629010	15.471165	+0.599546
2048	100%	15.466485	16.342327	15.214170	16.090012	+0.623528
2049	100%	16.085144	16.996020	15.822737	16.733613	+0.648469
2050	100%	16.728550	17.675861	16.455646	17.402957	+0.674407
2051	100%	17.397692	18.382895	17.113872	18.099075	+0.701384
2052	100%	18.093599	19.118211	17.798427	18.823038	+0.729439
2053	100%	18.817343	19.882939	18.510364	19.575960	+0.758617
2054	100%	19.570037	20.678257	19.250779	20.358998	+0.788961
2025-2054 total	—	347.901099	369.066292	342.417163	363.582357	+15.681258

Modeled 2025–2054 annual spending · nominal \$T

R09

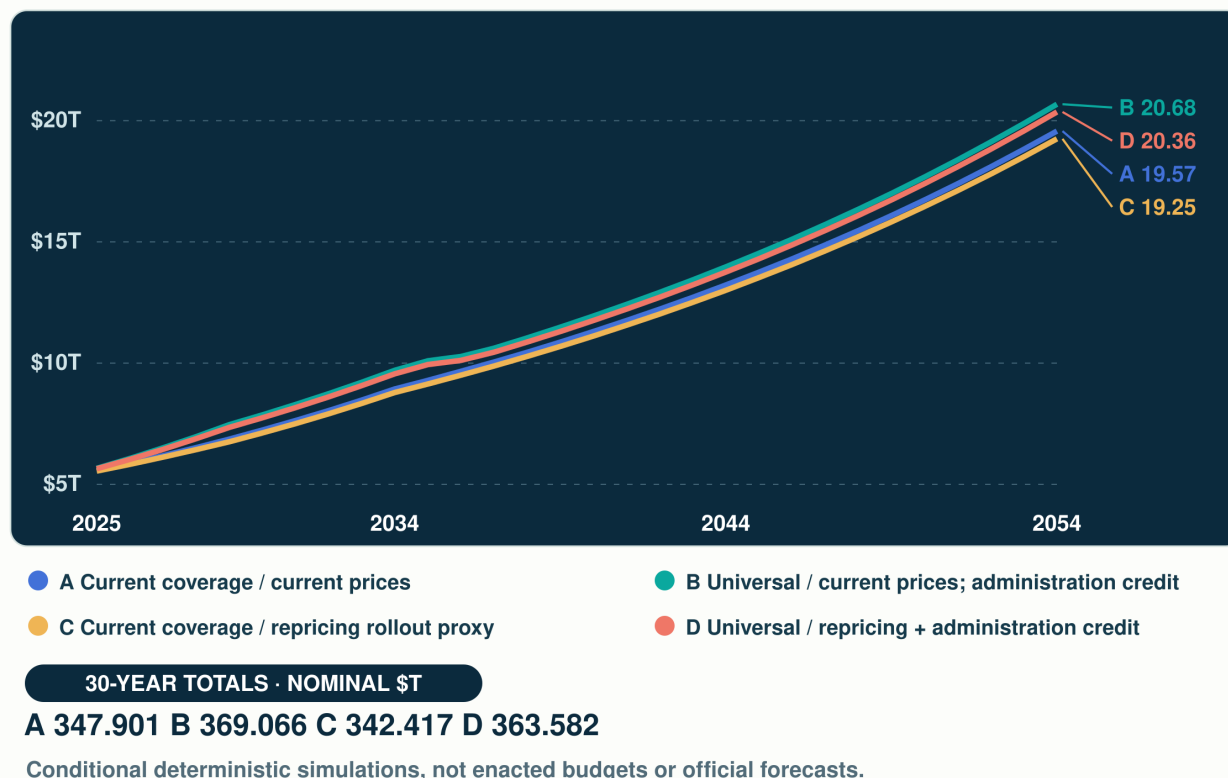


Figure S18 | R09: Modeled 2025–2054 annual spending · nominal \$T Exact annual ledger plotted; conditional national expenditure, not federal budgets.

Component, 2025–2054	Nominal (\$T)	Role
A status-quo cumulative spending	347.901098682	National expenditure baseline
B0 universal before reductions	373.561245310	Workbook model, adds ongoing and deferred care
Unrepriced B0 less A	+25.660146628	Expansion and related resources
Limited service repricing	–5.483935823	Conditional cuts on distinct payer/service cells
Net insurer nonmedical efficiency	–4.494952839	Conditional replacement-admin credit
D less A	+15.681257966	Net conditional national expenditure increase

Five-, ten-, twenty-, and thirty-year checks:

Years	A (T) B(T)	C (T) D(T)	D–A (\$T)
5	30.989254	32.656390	30.675303
10	71.299381	76.458519	70.327825
20	182.821346	194.638339	180.030462
30	347.901099	369.066292	342.417163

All rows are modeled nominal national healthcare expenditures, not a proposed federal

appropriation. The workbook’s B0 is used as a source input; its stored old provisional C/D values are not represented as updated.

Appendix D Exact arithmetic, prices, and precision reconciliation

All monetary calculation operands are in **\$billions** until divided by 1,000:

```
A_t, B0_t = stored provisional workbook Base annual cells
r_t = rollout fraction 2025–2029 (then 1)
w_t = A_t × r_t / 5278.588
P_2024 = 558.936×.10 + 505.059×.05 + 57.303×.02 + 172.095×.02 + 18.923×.02 = 86.11297
M_2024 = 176.458×.40 = 70.5832
P_t = w_t × P_2024
M_t = w_t × M_2024
B_t = B0_t – M_t
C_t = A_t – P_t
D_t = B0_t – P_t – M_t
D_t – A_t = (B0_t – A_t) – P_t – M_t
```

The cumulative multiplier is **63.683041276392** and is not a probability. This factor is generated directly from the 30 workbook Base rows. The model has **no separate C regulated-price roll-out parameter**; it reuses *r_t* despite Scenario C keeping coverage unchanged. An actual two-axis causal design would require distinct coverage and regulatory phase-in controls. Do not interpret D–C as a clean causal coverage estimate or B–A as one, because B/D also apply administration efficiencies.

2024 commercial service	Base (B)	Cut	Credit (B)
Commercial hospital	558.936	10%	55.89360
Commercial physician/clinical	505.059	5%	25.25295
Other professional category	57.303	2%	1.14606
Prescription-related category	172.095	2%	3.44190
Durable medical equipment category	18.923	2%	0.37846
Exact five-cell sum	—	—	86.11297

The historical consolidated report sometimes carried \$86.1128B per weighted 2024-equivalent year. The explicit five service cells produce **\$86.11297B**, a difference of **\$0.00017B** per 2024-equivalent year, or **\$0.000010826T (\$10,826,117)** in the thirty-year nominal model. The input-level category sum is the controlling *v3* calculation. The prior 30-year **+\$15.681268792T** is an archived rounded-control sensitivity, replaced by **+\$15.681257966T** for exact input-level reproducibility. Both display as +\$15.681T at three decimals; Documents 1 and 2 use that three-decimal precision.

The cut is an assumption applied to mutually exclusive **commercial payer/service cells**. It is not an observed excess payment or reduction in the physical cost of healthcare. The category labels above are those used in the model’s service-payer bridge; the CMS 2024 source matrix and Step 120 remain the underlying provenance.

Precision: A uses a \$5,278.600B working base; the stated CMS anchor is \$5,278.588B.
Reproduction: B0 is a stored workbook input; its annual generator is not supplied in this PDF.

Appendix E 2024 service/payer and ultimate sponsor accounting

Ultimate source of 2024 funds	Amount (\$B)	Do not duplicate
Federal government	1,652.0	Already represented in all-payer NHE
State and local government	859.7	Do not add as a second public-payer cost
Households	1,458.9	Includes underlying financing; premiums/copays are not newly additive
Private businesses	967.4	Existing sponsorship would transfer
Other private revenues	340.5	Separate residual sponsor
Rounded five-cell sum	5,278.5	\$0.1B published rounding vs \$5,278.6B NHE

The central **\$5,278.588B** source anchor is all-sponsor national NHE. The \$558.936B commercial hospital, \$505.059B commercial physician/clinical, and \$176.458B private-insurer nonmedical categories come from a different **service/payer** axis. A payment **payer** and a funding **sponsor** are not interchangeable. Source-account rounding and excluded service types are preserved; no hospital charge, denied claim, charitable write-off, or medical debt stock is entered as a second medical resource expense. The 2024 out-of-pocket subtotal is already contained within expenditure and sponsor finance, not a new pot of money.

Appendix F Comprehensive Medicare-reference pricing sensitivity and viability

Historical mixed-source reference results reported in Document 2. These are conditional scenario illustrations, not a uniform, nationally validated repricing forecast.

Illustrative price mix	5y	10y	20y	30y
JAMA (29% outpatient)	+0.588	+1.819	+2.222	+2.311
Milliman + RAND (51% outpatient)	+0.352	+1.088	+0.123	-1.814
Milliman + HCCI (62% outpatient)	+0.321	+0.993	-0.149	-2.348
RAND + Milliman (combined 2.583×)	+0.223	+0.689	-1.024	-4.066

Local re-calculation using rounded, mixed-source inputs and the category-exact model base. The printed external source ratios do not align perfectly with every historical input; the results below are therefore arithmetic checks of illustrative assumptions, not reproductions of a matched national price dataset:

Local recalculation	Hospital cut	Professional cut	Price (B)
JAMA; 29% outpatient	39.0638%	19.3548%	321.061
Milliman / RAND; 51%	41.4076%	29.5775%	385.792
Milliman / HCCI; 62%	42.9048%	29.5775%	394.160
RAND / Milliman; 2.583×	47.7352%	29.5775%	421.159

Local recalculation	5y	10y	20y	30y	Difference (B)
JAMA; 29% outpatient	+0.588	+1.819	+2.222	+2.311	+0.109

Local recalculation	5y	10y	20y	30y	Difference (B)
Milliman / RAND; 51%	+0.352	+1.089	+0.124	-1.811	+2.866
Milliman / HCCI; 62%	+0.321	+0.994	-0.147	-2.344	+3.941
RAND / Milliman; 2.583×	+0.223	+0.690	-1.022	-4.063	+2.569

Difference = recalculated value minus the value previously reported in Document 2; this is not a published-paper estimation error.

Medicare-reference cases: sources are not interchangeable

R11

ILLUSTRATIVE SOURCE	HOSPITAL BASIS	PROFESSIONAL BASIS	PUBLISHED 30Y D-A
JAMA	29% outpatient	1.24× reference	+\$2.311T
Milliman / RAND	51% outpatient	1.42× reference	-\$1.814T
Milliman / HCCI	62% outpatient	1.42× reference	-\$2.348T
RAND / Milliman	Combined 2.583×	1.42× reference	-\$4.066T

Source-derived published sensitivities, not the independently reconstructed totals.

No common claims denominator, pooled confidence interval or validated national provider tariff.

Figure S19 | R11: Medicare-reference cases: sources are not interchangeable Unlike study cohorts cannot form a pooled national confidence interval.

Tariff illustration, in 2024-equivalent billions (o = assumed outpatient share):

```

hospital_cut      = (1-o)*(1-1.35/r_inpatient)
                  + o*(1-1.35/r_outpatient)
professional_cut  = 1 - 1/r_professional
price_B           = 558.936*hospital_cut
                  + 505.059*professional_cut + 4.96642
extra_net_B       = price_B - 86.11297 - 25.0
D_alt_t           = D_limited_t - weight_t*extra_net_B

```

For the **RAND combined** row alone, replace hospital_cut with $1 - 1.35/2.583$. The same calculation can be written $D_{alt} = B_0 - \text{weighted administration credit} - \text{weighted alternative price credit} + \text{weighted \$25B support}$. The **\$25B 2024-equivalent support is an unvalidated hypothetical expense** and scales by the model-year multiplier; it is not a measured provider shortfall, public subsidy or savings credit.

Some independently recalculated rows differ from the **values previously stated in Document 2** by a few billion dollars over 30 nominal years. The available inpatient/outpatient and professional ratios are rounded and exact source-side blending precision is unavailable; **rounding is a possible contributor but is not proven to be the sole cause**. The **30-year comparison column records local recalculation minus Document 2 historical illustration**, in billions. This is a qualified numerical comparison rather than an exact independent reproduction of the original source blend. The earlier values remain quoted for traceability; they are **not** asserted to be independently reproduced to sub-billion precision. The source populations (JAMA, RAND, HCCI and Milliman) differ;

the rows cannot be pooled or averaged as uncertainty probabilities. No row certifies access, actual national healthcare resource savings, or provider-safe reimbursement.

Viability overlay. At unchanged volume and cost, $\text{new_margin} = (m - c \times p) / (1 - c \times p)$, where m is the prior operating margin, c fee reduction on the affected business, and p share of total revenue from that business. The source matched public 2024 inpatient DRG claims to 2023 hospital cost-to-charge ratios (2,882 IPPS facilities, 145,586 published DRG rows, 4,944,875 discharges). Its 135%-of-Medicare 6.41% estimated proxy-under-cost discharge exposure and \$1.240B positive selected-DRG shortfall are **not** a nationally certified service-cost schedule or \$25B support requirement. The sample excludes other facilities and relies on prior-year hospital-wide cost ratios. Access, rural readiness, acute-care standby costs and other service types remain decisive.

Appendix G Financing, sponsor transfer, and household-affordability framework

The principal accounting identities are new unified payer financing = redirected pre-existing sponsor contributions + additional collections required and D = total modeled national healthcare payments/expenditure under D , irrespective of the collector. D does **not** measure real clinical labor, supplies or facility costs independently; a fee cut may lower NHE payments without reducing physical resource requirements. The modeled first-five-year middle-case D of approximately **\$32.342T** was illustrated as **~\$19.245T redirected resources + ~\$1.353T extra finance + ~\$11.745T remaining other-source spending**; independently rounded display cells can sum to \$32.343T. **Those elements are allocations, not additive to D a second time.** Employer contributions, household premiums, payroll and income taxes, existing government funding, and transition reserves must reconcile by year; four hypothetical financing splits in the archive are not enacted rates, tax-incidence estimates or cash-flow proof.

Appendix H Screenings, capacity comparator, and recovered Step 107 register

Screening schedule, 2025-2027 (millions; alternatives are not additive):

Screening path	2025	2026	2027	Unit / interpretation
Colorectal newly current, first/higher	2.418/4.836	2.418/4.836	2.418/4.836	Million people, not procedures
Initial FIT if all choose FIT, first/higher	2.418/4.836	2.418/4.836	2.418/4.836	Million first kits; exclusive of direct-colonoscopy pathway
FIT-positive diagnostic colonoscopies, first	0.171-0.193	0.171-0.193	0.171-0.193	Million conditional procedures
FIT-positive diagnostic colonoscopies, higher	0.341-0.386	0.341-0.386	0.341-0.386	Million conditional procedures; alternative scenario

Screening path	2025	2026	2027	Unit / interpretation
Direct colonoscopy, first/higher	2.418/4.836	2.418/4.836	2.418/4.836	Million if all choose direct; never add to all-FIT scenario
Mammography with biennial repeats, first	1.450	1.450	2.900	Million procedures
Mammography with biennial repeats, higher	2.390	2.390	4.780	Million procedures, alternative
Cervical screening eligibility ceiling, first/higher	≤1.977/≤3.955	≤1.977/≤3.955	≤1.977/≤3.955	Million possible initial tests; clinical exclusions not resolved

Continuation, 2028-2029 (same paths and units):

Screening path	2028	2029	Unit / interpretation
Colorectal newly current, first/higher	2.418/4.836	2.418/4.836	Million people, not procedures
Initial FIT if all choose FIT, first/higher	2.418/4.836	2.418/4.836	Million first kits; exclusive of direct-colonoscopy pathway
FIT-positive diagnostic colonoscopies, first	0.171-0.193	0.171-0.193	Million conditional procedures
FIT-positive diagnostic colonoscopies, higher	0.341-0.386	0.341-0.386	Million conditional procedures; alternative scenario
Direct colonoscopy, first/higher	2.418/4.836	2.418/4.836	Million if all choose direct; never add to all-FIT scenario
Mammography with biennial repeats, first	2.900	4.350	Million procedures
Mammography with biennial repeats, higher	4.780	7.171	Million procedures, alternative
Cervical screening eligibility ceiling, first/higher	≤1.977/≤3.955	≤1.977/≤3.955	Million possible initial tests; clinical exclusions not resolved

Step 124 national **observed use** comparators are approximately **45.084M yearly mammography procedures** (FDA MQSA reporting October 2026) and **15.475M yearly colonoscopies** (historical 2022 estimate published 2025). Neither measures **unoccupied staffed appointments**. A simulated year-five mammography addition of 4.350M/7.171M equates to about 9.65%/15.91% of the mammography comparator; direct CRC colonoscopy 2.418M/4.836M equates to 15.62%/31.25% of total colonoscopy use. These ratios are **scale comparisons, not demonstrated throughput capacity**. FIT follow-up depends on clinical positivity and completion assumptions, and direct colonoscopy is an alternative, not a stacked extra.

The **original Step 107 JSON has been recovered and SHA-256 checked**, so the earlier blanket claim that it was unavailable is wrong and is withdrawn in the present assessment. It was prepared

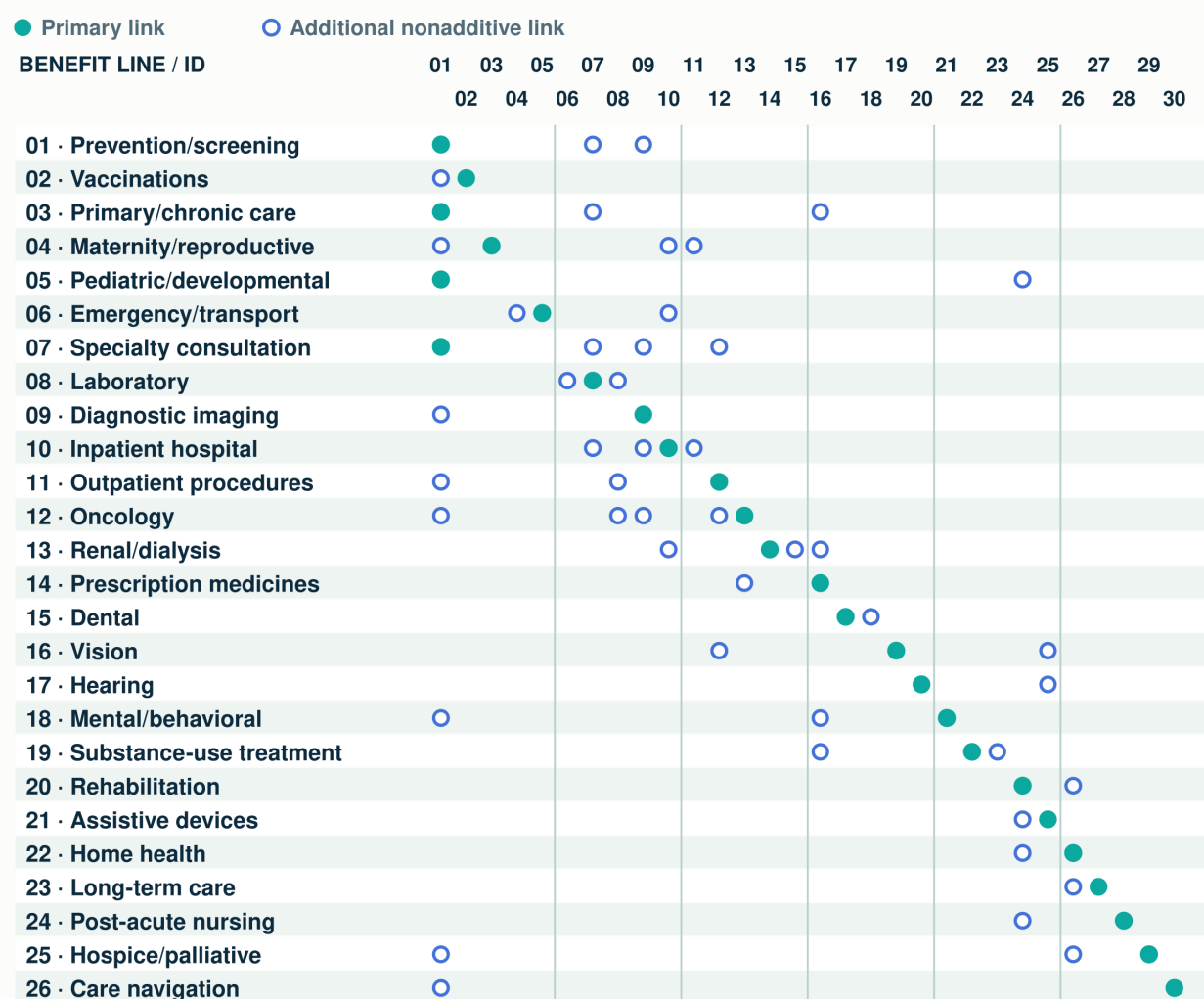
2026-10-25 and contains **30** exact event-family keys in **120** scenario-year objects: **3,600** materialized family-scenario-year positions across A/B/C/D and 2025–2054. Its older 100,800-address cohort detail is **virtual indexing**, not 100,800 observed clinical cases.

Critical limit: The register's 2025_2054_national_event_count, annual_total_requested_due_events, staffed_capacity_completable_events, and completed_events are null. Forecast and cost-update objects are also null. The exact gate is HISTORICAL_BASELINE_INTEGRATED_PHASE2_QUANTIFICATION_OPEN. The register proves a versioned **demand data structure and historical baseline reconciliation**, not 3,600 completed national treatment forecasts.

Exact canonical event-family ID	Primary benefit IDs	Other links (nonadditive)
ambulatory_encounter	1,3,5,7	1,2,3,4,5,7,9,11,12,18,25,26
vaccine_administered_dose	2	2
labor_delivery_episode	4	4
ems_transport	—	6
emergency_department_encounter	6	6
specimen_collection	—	8
lab_completed_assay	8	1,3,7,8,10
pathology_report	—	8,11,12
imaging_exam	9	1,7,9,10,12
inpatient_stay	10	4,6,10,13
inpatient_night	—	4,10
outpatient_procedure	11	7,11,12,16
infusion_session	12	12,14
dialysis_session	13	13
transplant_episode	—	13
retail_rx_purchase	14	3,13,14,18,19
dental_attended_visit	15	15
dental_procedure	—	15
vision_exam_fitting	16	16
audiology_exam_fitting	17	17
behavioral_therapy_session	18	18
sud_treatment_encounter	19	19
sud_residential_patient_day	—	19
rehab_session	20	5,20,21,22,24
device_fitting_delivery	21	16,17,21
home_health_visit	22	20,22,23,25
long_term_direct_care_hour	23	23
postacute_skilled_patient_day	24	24
hospice_palliative_patient_day	25	25
navigation_case_contact	26	26

Exact 26 × 30 nonadditive benefit/event crosswalk

R10



Rows and E01–E30 columns share links; these are not 780 separate billable services.

E01–E30 are decoded in the adjacent Appendix H exact-key table; row labels shortened for print.

Figure S20 | R10: Exact 26 × 30 nonadditive benefit/event crosswalk Visual companion to the exact canonical key table; relationships are nonadditive.

Conservative Step 124 crosswalk (documentation-only, no payload change): preventive enrollment counts are person/exposure counts and must not be loaded as event-family completions. Initial stool FITs can route as lab_completed_assay (with a different specimen-collection event if independently counted); a completed diagnostic or direct colonoscopy belongs in outpatient_procedure; screening mammography belongs in imaging_exam; biopsy pathology is pathology_report, and navigation is navigation_case_contact when actually recorded. These are semantic candidate joins now grounded in real IDs. The precise clinical episode identity, FIT/direct-colonoscopy nonadditivity, recurrence rules, staffed completion ceilings, age/coverage cohort adjustment, and A/C baseline subtraction remain unresolved. **No Step 124 annual counts have been posted into Step 107** or financial A/B/C/D.

Verified source: Universal_Healthcare_Step107_Integrated_Demand_With_Coverage_Margins.json ; complete SHA-256 33693717af7a2db38c114452390ca21e72bef08eb65a07d3dca2908cebb8d1c0. The original is a versioned research artifact; private storage identifiers are not public

data citations. For external replication, provide the source bytes and verify against the stated hash.

Appendix I Matched-provider cost economics and coverage boundaries

The published matched-IPPS hospital proxy combines observed 2024 payment records with **2023** cost-to-charge data, so the estimate is neither a same-service same-year true-cost audit nor a complete all-provider census. Follow-up payer-mix stratification discovered greater reported service-margin strain for high Medicaid-day hospitals, while the initial source rural/urban label was corrected to a physical-location classification. Actual inpatient, outpatient, primary, rural, dental, behavioral, long-term, ambulance, device and pharmacy service-specific cost curves must be tested before claiming national payer price levels are operational. Provider stabilization cannot be counted both in the original source payments and as a new full duplicate grant.

Appendix J Nonprice savings and overlap ledger

Mechanism	Explicit current cash credit	Reason for treatment
Net private-insurer nonmedical administration savings	w_t×\$70.5832B per year	Conditional 40%-net model parameter; replacements assumed rather than independently costed
Unpaid hospital bills / medical debt	\$0 additional	Debt stock, provider accounting, and claims resources overlap existing spending
Medicare/Medicaid improper payments	\$0 additional	Improper payment is not synonymous with verified fraud or a recoverable annual saving
Pharmaceuticals beyond priced service cell	\$0 additional	Would require validated net transaction basis and rebates/discount overlap
Earlier detection and treatment avoidance	\$0 additional	Clinical outcomes and stage-specific avoided costs not causally measured
Billing simplification outside insurer nonmedical	\$0 additional	Requires employer/provider administrative cost evidence and removal of overlap

An explicit zero credit means no verified additional amount has been deducted from the modeled budget; it is **not** evidence the corresponding public-health or financial benefit equals zero. Where a national NHE service reduction is a payer transfer, it may not reduce the physical resources needed to produce healthcare.

Appendix K Quality-adjusted life-years, household protection, and bankruptcy

The historical limited-price middle case produced a conditional ~\$7.551T 2025 present-value increment and ~\$374B annual equivalent under the explicit sensitivity assumptions of 2% annual general inflation, 3% annual real discounting, and 2025 as the base year (30-year real annuity factor ~20.1885). These are valuation choices, not measured price forecasts. Dividing that annual cost by \$100,000 or \$150,000 per net QALY implies thresholds of ~3.74M or ~2.49M annual incremental QALYs. These are **required health improvements to break even on a value criterion, not achieved outcomes**. The thresholds would change when a different price case, discount rate, time profile or benefit valuation is substituted. Separately, medical debt and bankruptcy counts can overlap illness-induced income loss and unpaid claims; dollar debt face value is not an annual medical-cost saving.

Appendix L Research chronology, corrections, and decision gates

The analytical sequence moved from coverage/population definitions to 26-benefit demand design, a 30-event family structure, national provisional finance, service-payer correction (Steps 118–120), nonprice ledger (121), screening and capacity (122–124), and consolidated provider/cost sensitivity on October 26, 2026. **Step 107 has now been recovered**; other early Step 1–106 and Step 48 source bytes remain outside the available research file inventory. The archive retains historical statements when records were unavailable; such language is not the controlling present finding.

Earlier statement/result	Current disposition	Why
Step 107 register unavailable	Corrected: recovered and verified	Exact 30 canonical IDs and 3,600 positions checked; projection cells still null
Category-price annual \$86.1128B	\$86.11297B controls	Recomputed five observed payer/service cells × assumed cuts
30y +\$15.681268792T at rounded annual control	+\$15.681257966T	~\$10.826M difference; same \$15.681T at display precision
Original +\$9.439878T middle	Superseded	45% whole-NHE repricing assumption unsupported
Original –\$18.345451T optimistic	Superseded	Optimistic price/clinical offsets unvalidated
~+\$0.155T blended hospital example	Withdrawn	Incompatible cohort/price denominator
Four mixed-source sensitivity rows	Conditional, with numeric residuals explicitly shown	Rounded price ratios and mismatched study populations
Physical screening merge or completed national care	Not done	Step124 schedule is independent; Step107 future service counts remain null

The research policy stop line is **GO for conceptual feasibility exploration, NO to guaranteed-cost-saving claims, NO-GO for rollout approval**. Four later implementation-validation decisions—not newly authorized research in this closed thought experiment—remain:

Required separate implementation decision	Existing evidence	Not established
Provider-safe reimbursement	CMS matched IPPS cost-to-charge proxy, payer-mix sensitivities	Nationwide specialty-specific actual costs and safe tariff
Additional staffed treatment throughput	Step113/114 workforce models; Step124 national observed procedure workload	Incremental open slots, clinical completions and geography
Real financing and transition	2024 sponsor mix and modeled transfer	Yearly legal tax/contribution design and transition cash flows
Health/financial value	Discounted threshold QALY and source screening opportunities	Causally demonstrated new QALYs, disability reductions, medical-debt prevention

Appendix M Research artifact inventory and internal reproduction protocol

This is the **historical project inventory as byte-checked at the time of the underlying research audit**, not an inventory of current publication exports or a publicly downloadable replication bundle. It includes the Step 110–116 machine-readable calculation, intake and audit objects, Step 117’s **unsent** data request, and the consolidated preface retained in Appendix N. It is not a claim that every historical Step 1–106 artifact has been recovered. Some files are private research artifacts; their paths identify an audit package, **not** public web links. **In particular, M07 and M09 are older PDF versions; their byte counts and SHA-256 identifiers must not be used to verify the newly exported Documents 1 and 2.**

Publication index: The shortened hashes below are identifiers, **not** complete verification digests. All original relative paths, byte counts and full 64-character SHA-256 values are preserved in **Appendix P of this report**.

ID	Research artifact	Bytes	SHA-256 prefix
M01	Document 3 Technical Research v2.md	419,647	47ecaf92ea4a
M02	Document 3 Technical Draft v1.md	398,884	436a3976b41a
M03	Consolidated National Feasibility 2025-2054.md	156,633	3d3ed7c37a6c
M04	ABCD 2025-2054 Provisional Model.xlsx	52,499	5d532bc5a7ff
M05	ABCD 2025-2054 Provisional Report.md	6,426	9211ca936c53
M06	Step107 Integrated Demand With Coverage Margi...	4,508,842	33693717af7a
M07	Executive Policy Brief 2026.pdf	49,421	e9cdd52885a3
M08	Final Conceptual Feasibility 2025-2054.md	28,603	a1796bd8716b
M09	Final Conceptual Feasibility 2025-2054.pdf	410,781	483efda32b9d
M10	Step108 Coverage Linked Demand Sensitivity.md	17,225	f545db1e183c

ID	Research artifact	Bytes	SHA-256 prefix
M11	Step109 Policy Marginal Exposure Definition.md	10,626	3bc546905e8d
M12	Step110 Joint 2024 Exposure Report.md	9,441	bfb67489bd62
M13	Step111 Conditional Exposure Uptake Report.md	11,342	e57c3a5f2963
M14	Step112 Initial Surge Calibration Report.md	11,718	f26b7ad1d39d
M15	Step113 Regional Workforce Capacity Report.md	13,968	e602496dd24c
M16	Step114 Staffed Hour Pilot Report.md	8,550	d8b835950fa5
M17	Step115 Mecklenburg Dental Pilot Report.md	10,105	41733362fdc f
M18	Step116 Local Dental Capacity Intake Report.md	8,886	6335bbc54a89
M19	Step117 Mecklenburg Public Source Audit.md	6,199	06adc64f6560
M20	Step117 Unsent MeckDental Data Request.md	1,970	4f0f048604ac
M21	Step110 Joint 2024 Exposure Audit.json	181,889	1b1a06cd4cb6
M22	Step111 Conditional Exposure Uptake Contract....	102,158	a400fa1095e0
M23	Step112 Initial Surge Sensitivity.json	47,261	7277f4aa51b6
M24	Step113 Regional Workforce Capacity Audit.json	1,913,215	5deea86ac04c
M25	Step114 Staffed Hour Pilot Audit.json	11,796	c91b891e071d
M26	Step115 Mecklenburg Dental Pilot Audit.json	4,533	ddf8dee99f42
M27	Step116 Local Dental Capacity Intake Contract...	5,027	48c13f7b7e7a
M28	Step118 National Repricing Denominator Audit.md	11,198	606316196950
M29	Step119 CMS Service Payer Audit.md	6,918	b44d0222c587
M30	Step120 Service Specific Price Bridge.md	11,605	5bd8438a46af
M31	Step121 Nonprice Savings Ledger.md	13,155	3c074516dcd f
M32	Step122 Early Detection Outcomes Bridge.md	12,889	bfb87a02144a
M33	Step123 National Screening Headcounts And Ann...	14,829	bca4bf82055e

ID	Research artifact	Bytes	SHA-256 prefix
M34	Step124 Screening Capacity And Demand Integra...	13,634	58da347a0312
M35	Step119 2024 CMS Service Payer Matrix.xlsx	9,086	e63557f33cb3
M36	audit results.json	55,805	d172efe49cd7

Current companion exports (four-document edition)

The following are the **current exported PDFs**, verified independently from the historical research-file hashes above. Byte sizes and full SHA-256 digests apply to these exact two companion exports, **not** to the older M07/M09 files:

Published companion	Bytes	Current SHA-256
Document 1 — Executive Policy Brief (2026)	455,824	75db9fb01bedb00c451235b7a3251c5b286459054f65bfa5819fa4cd3b3cd1fb
Document 2 — Conceptual Feasibility (2025-2054)	2,077,279	77dba0912e239bf9929263eddb8a02ddf7711651e1eb65e9035dbd1312f3f04d

The current Document 4 PDF is this dossier; its exact byte size and SHA-256 must be calculated **after final PDF export**, not embedded into its own self-changing source or confused with a historical research digest.

Internal reproduction order (external replication requires the versioned research files, workbook and data definitions): verify the CMS 2024 NHE and service/payer denominators; select the workbook’s 30 Base rows; calculate P=86.11297 and M=70.5832 (\$B 2024-equivalent); recompute A/B/C/D for each year with the documented rollout; compare displayed D–A at 5/10/20/30 years; check Step 107’s exact keys and null national clinical service completions; compare price alternatives with numerical residuals in Appendix F; independently reconcile the key external studies’ population/method/years before using those ratios as potential tariffs. Full SHA-256 digests protect local byte identities, not accuracy of every study interpretation.

Part VI — Preserved historical research record

Reader’s boundary: Everything in Appendix N below is copied from the prior research record. References to earlier versions, unresolved source availability, historical calculations and suggested next actions describe the state at the time those texts were written. They are **not** a later revision or an instruction to resume work. The controlling present findings are in Chapters 1-20 and Appendices A-M and O; exact audit file identities are in Appendix P.

Appendix N Complete archival research texts (historical, not present-tense instructions)

The source texts reproduced below preserve the **historical substantive content** of the consolidated October 26 research (23 original sections) and the available Step 108-124 reports (17 records). Their own older sentences about missing files, ‘next steps,’ older middle-case precision, or hypothetical future tasks are preserved solely as history. **Current v3 appendices A-M, bibliography O, and the opening chapter notes supersede conflicting statements.** The original v1 manuscript is also byte-preserved as a separate source file in Appendix M’s manifest. Original step reports are not evidence that 2025-2054 was an actual government rollout. Dates and source claims are not retrospectively rewritten.

N.0 Consolidated source executive preface (historical)

A Universal U.S. Healthcare System: Consolidated National Feasibility Model

National A/B/C/D scenario study, 2025-2054 | Consolidated October 26, 2026

Status: provisional and conditional—not a certified budget score, legislative proposal, or implementation forecast.

All dollar figures are **nominal U.S. dollars**. “T” denotes trillions and “B” billions. The year labels are the simulation horizon; no national rollout began in 2025.

Executive finding

Can the United States plausibly organize universal healthcare with independent care providers, broad benefits and regulated procedure prices? Yes as a system design: coverage and payment can be reorganized, and existing public and international payment approaches demonstrate relevant mechanisms. But the proposed design is not yet proven to preserve provider capacity, fund itself, or cost the nation less.

What does our actual model say? Under the previously tested limited-price-cut middle assumptions, universal coverage with regulated prices (**D**) costs **\$4.19T more than the status quo (A) during the first 10 years**, and **\$15.68T more over 30 years**, before assigning any monetary offset to improved long-term health. That is roughly **4.5% more cumulative national health spending** over 30 years and **not** a \$15.68T federal deficit. **Important subsequent correction (Section 20): this limited 10%-hospital/5%-professional commercial-payment cut was not**

a complete test of the user’s central proposal for comprehensive, government-set service reimbursement. A separate illustrative Medicare-reference sensitivity finds that deeper hospital/professional allowed-amount controls can mathematically nearly eliminate the gap or reverse its sign. That possibility is **not** yet certified as provider-safe or implementable.

The three original guarded/middle/aggressive price-cut cases **still leave D more expensive** than A, but **do not bound the new Section 20 Medicare-reference price-setting sensitivity.** None of these rates or outcomes are probabilities or independently estimated confidence intervals. An older model that suggested D could produce \$18.35T of 30-year savings used broader, unverified price cuts and clinical offsets; that old result is superseded and is not revived by the new price-setting exercise.

The central decision is therefore not “Is universal care automatically free or cheaper?” It is: **Can we set sustainable net prices, shift existing financing, deliver substantially more needed care, and generate enough measurable health and economic benefit to justify the added resources?** Present work supports continued feasibility design, but cannot yet answer that decisively. **Section 21 adds the first provider-cost and reimbursement-supplement stress test; it is not a certified national fee schedule.**

Overall feasibility decision and research stop line (October 26, 2026) The core thought experiment now has a conditional answer. The model provides an internally reconciled national spending comparison; the largest unresolved questions are about **whether this system can safely deliver the extra care, how it would be paid for, and what health value the added spending buys.** We do not need to finish an entire income-tax code, regional clinical registry or legislative tariff schedule to state that result.

National-level question	Current result	Decision
Is the proposed universal design conceptually possible?	Yes in principle , with a public financing mechanism, independent providers and service-specific regulated payments.	Keep it as a serious feasibility option.
Does the tested design reduce total national medical spending?	Not in the three original limited-cut cases. Their middle D–A difference is +\$1.353T/5yr, +\$4.188T/10yr, +\$9.026T/20yr, and +\$15.681T/30yr (about 4.51% of status quo 30-year spending). Section 20’s additional Medicare-reference tariff sensitivities range from extra spending to conditional mathematical savings , but have no provider-cost certification.	Do not market any rate scenario as established nationwide savings.
Is the extra spending inherently wasteful?	Not established. Earlier access, treatment completion and better health may have substantial value, but population outcomes and nonduplicative clinical cash offsets are not yet estimated.	Evaluate value and cash separately.
Can hospitals and staff deliver the assumed expanded services at the modeled fees?	Unverified. The national backlog clears only if assumed throughput is real; rural and specialty viability are not established.	No implementation approval on this evidence.

National-level question	Current result	Decision
Is the national bill funded through an equitable, workable replacement of today's spending?	Unverified. Existing sponsor pools are measured; four marginal financing allocations and illustrative gross contributions were tested. Neither is a full year-by-year tax, payroll, wage or budget score.	Require a reconciled transition before launch.

Decision: GO for a focused feasibility/valuation case built around universal coverage, comprehensive benefits **and serious government-set reimbursement levels**; **NO** to the claim that achievable nationwide savings are yet established; **NO-GO for implementation commitment** on the presently available evidence. Our original +\$15.681T middle price result is **not** a reliable final cost ceiling or floor: the breadth of the tariff policy, 6% additional-care allowance and provider reimbursement/capacity assumptions are especially consequential. The Section 20 price sensitivity specifically corrects an earlier under-test of the proposed primary price-control mechanism.

Only **four decision-changing tests** should be reopened, and only at the national level until they affect a result: **(1)** a provider-viable representative price schedule against actual delivery costs; **(2)** a service-and-workforce throughput stress test for the early surge, 26-benefit scope and rural access; **(3)** a year-by-year financing/transition cash ledger that redirects existing sponsorship once and measures net burden; and **(4)** credible health-outcome and disability/financial-protection valuation, counted separately from verifiable healthcare cash savings. Each must have an explicit national cost/access/viability consequence. The family-size/filing-status tax optimization started in Section 13 is **parked** because it cannot change the current spending-versus-benefit conclusion.

Stop line: We have **completed a conceptual national comparison** and now explicitly tested an additional pricing sensitivity that materially changes its answer, not an implementation certification. The **provider-viable national tariff** remains the one unresolved mechanism most capable of shifting the expenditure result. Do not reopen unrelated tax, city-by-city or individual-provider research. Detailed engineering belongs to later validation if representative allowed-amount and provider-cost testing demonstrates a reason to proceed.

N.1 Consolidated original section 1 (historical)

1. The model we agreed to examine

The design remains **universal coverage for U.S. residents**, with one primary public financing/payer mechanism, largely **independent hospitals and clinicians**, common and transparent nationally regulated service-specific reimbursement, a goal of **\$0 at the point of medically covered care**, and a **five-year transition**. The intention is to cover substantially more than emergency rescue: early detection, full follow-up and treatment, chronic disease, long-term and home support, and rehabilitative needs. Existing Medicare/Medicaid coverage and dollars must be reconciled, not added again as though those patients were newly uninsured.

All 26 established benefit lines are retained:

1. Prevention and screening; 2. vaccinations; 3. primary/chronic care; 4. maternity and reproductive care; 5. pediatric/developmental care; 6. emergency care and transport; 7. specialty consultation; 8. laboratories; 9. imaging; 10. inpatient hospital care; 11. outpatient procedures; 12. oncology; 13. renal replacement/dialysis; 14. prescriptions; 15. dental; 16. vision; 17. hearing; 18. mental/behavioral health; 19. substance-use treatment; 20. rehabilitation; 21. durable equipment and assistive devices; 22. home health; 23. long-term/personal care;

24. post-acute skilled nursing; 25. hospice/palliative care; 26. navigation/casework/social support.

Important limitation: The existing national model includes those benefits as policy scope and aggregate expenditure allowances. It is **not** a completed billable price-and-utilization forecast for each of the 26 services or each of the 30 event families in the original demand register.

Policy	Coverage	Service prices	Purpose in the experiment
A	Existing arrangements	Existing trajectory	Status quo comparison
B	Universal	Existing prices	Isolate the effect of paying for broader care
C	Existing arrangements	Regulated prices	Isolate savings from repricing existing services
D	Universal	Regulated prices	Our proposed combined system

The basic inputs, inherited from the earlier model, are: **\$5.278588T** U.S. national health expenditures in **2024** (CMS); projected nominal baseline growth of **5.4% annually through 2034**, then an illustrative **4.0% through 2054**; universal coverage ramping at **20%, 40%, 60%, 80%, 100%** across 2025–2029; a **6% recurring additional covered-care allowance**; **1% workforce/facility investment allowance**; an initial deferred-care wave and a **3%-of-baseline annual catch-up delivery cap**. These percentages are model assumptions, not measured national implementation effects. All payers together comprise national spending; a public/private payment shift does not itself reduce spending.

N.2 Consolidated original section 2 (historical)

2. Reconciled four-way national spending comparison

The central case below **recalculates** our original coverage-expansion model with the latest Step 120 payer/service-specific pricing and Step 121 private-insurer-administration assumptions. The price reduction is applied **only** to the current privately insured service pools identified in the CMS 2024 payer matrix, scaled forward with the rollout. It does **not** apply blanket cuts to Medicare/Medicaid, all healthcare, or the extra newly covered services. The administrative reduction is a hypothetical net saving after public replacement administration. No unverified prevention, fraud, unpaid-bill, or additional pharmaceutical saving is booked.

Cumulative expenditures under the conditional middle case (\$T)

Years covered	A: current/current	B: universal/current	C: current/regulated	D: universal/regulated	D minus A
5 (2025–2029)	30.99	32.66	30.68	32.34	+1.35
10 (2025–2034)	71.30	76.46	70.33	75.49	+4.19
20 (2025–2044)	182.82	194.64	180.03	191.85	+9.03
30 (2025–2054)	347.90	369.07	342.42	363.58	+15.68

This table isolates what expanded coverage buys and what the currently tested efficiencies offset. For example, in the **30-year** middle case: covering more care before new efficiencies adds **\$25.660T** relative to A; repricing a limited pool of existing commercial services avoids **\$5.484T**; a conditional net reduction in private-insurance nonmedical expenditure avoids **\$4.495T**. The residual is **\$25.660T – \$5.484T – \$4.495T = +\$15.681T**. Administrative savings are assigned to B and D; service-price savings are assigned to C and D.

How sensitive is the answer to the uncertain rates?

Additional D spending versus A (\$T)	5 years	10 years	20 years	30 years
Guarded: modest cuts	+1.72	+5.31	+12.25	+22.02
Conditional middle: tested central assumptions	+1.35	+4.19	+9.03	+15.68
Aggressive stress: much deeper cuts	+0.89	+2.75	+4.91	+7.59

These are assumption scenarios, not best-case/most-likely/worst-case forecasts. The aggressive case is potentially unsafe for some providers without corresponding reductions in actual delivery costs, targeted support or new capacity. Its larger savings do not establish an executable reimbursement schedule.

Precisely what savings were modeled?

Test	Guarded	Conditional middle	Aggressive stress
Hypothetical private-insured hospital fee cut	3%	10%	20%
Hypothetical private-insured physician/clinical fee cut	1%	5%	10%
Other small category cuts	None	Selected other professional, Rx and durable equipment	Wider limited-category cuts
Equivalent 2024 service-price reduction across all national spending	\$21.819B	\$86.113B	\$177.800B
Hypothetical net reduction of private insurer nonmedical expenditure	20%	40%	60%
Equivalent 2024 net administration reduction	\$35.292B	\$70.583B	\$105.875B

The underlying 2024 category controls are **\$558.936B** in private-health-insurance hospital spending, **\$505.059B** in private-insurance physician/clinical spending, and **\$176.458B** in private-insurer nonmedical expenditure. These come from the CMS spending-by-service-and-payer matrix. None is a measured pool of completely eliminable excess cost. One must never add Medicare/Medicaid spending to them and reapply the same discount. See source Step 120 for the full service table.

N.3 Consolidated original section 3 (historical)

3. What the initial shock actually looks like

The 2025–2029 values are **simulated annual costs**, not observed policy results. All national expenditure amounts are \$T per year; the deferred-care queue is also measured as hypothetical dollars, **not patients**.

Simulation year	Coverage rollout	A spending	D middle spending	Extra D vs A	Closing deferred-care queue
2025	20%	5.564	5.642	+0.078	0.022
2026	40%	5.864	6.029	+0.165	0.069
2027	60%	6.181	6.441	+0.261	0.143
2028	80%	6.515	6.881	+0.366	0.248
2029	100%	6.866	7.349	+0.483	0.385

The aggregate dollar queue peaks around **\$0.530T in simulation year 2030**, declines after catch-up request growth subsides, and clears around **2036**, but **only because the model assumes sufficient overall throughput to deliver it**. This is **not** evidence that local hospitals, therapists, dentists, mammography units or endoscopy teams actually possess the spare staffed slots. A queue mathematically clearing nationally can coexist with untenable rural or specialty wait times.

The program's intended early cost increase is not automatically failure: millions of people currently delay beneficial care. Bringing them into primary care, diagnostic imaging, pathology, dental services, treatment and ongoing management naturally generates visits and near-term claims. The health rationale is that earlier intervention often produces better outcomes **even where lifetime dollars do not decline**. A higher national bill must, however, be deliberately funded and supported by the workforce.

N.4 Consolidated original section 4 (historical)

4. Who pays: financing is not the same as consumption

The original model assigned a **47.6% government-sponsored share** to A/C and an **85% share** to B/D. The existing share approximately matches CMS's **observed 2024 government sponsor total** of \$2.5117T out of \$5.2786T, but keeping it fixed for 30 years is a modeling assumption. **The 85% new-system share is entirely hypothetical**. More importantly, **payer and sponsor are different**: CMS counts employees' and employers' Medicare payroll taxes against **household/business sponsors**, even though Medicare itself pays the claims. One primary public payer therefore does **not** establish what percentage is government-sponsored. This illustrative split is **not** a federal tax rate, actual federal/state budget commitment, household savings estimate, or final funding formula. Under the intended **\$0 point-of-service** design, the source of the remaining 15% also requires explicit definition; it cannot silently be a patient copay. Section 10 provides the verified sponsor breakdown and corrects this interpretation.

Financing illustration, conditional middle case (\$T)

Horizon and policy	National healthcare spending	Government-financed share	All other financing
10 years — A	71.30	33.94	37.36
10 years — D	75.49	64.16	11.32
10 years — D minus A	+4.19	+30.23	−26.04
30 years — A	347.90	165.60	182.30
30 years — D	363.58	309.05	54.54
30 years — D minus A	+15.68	+143.44	−127.76

Interpretation: The enormous estimated increase in publicly financed payments primarily represents a **change in who pays existing and expanded medical bills**, not \$143T in newly consumed medicine. Actual federal, state, local, employer and household incidence requires one reconciled funding ledger: redirect current Medicare/Medicaid spending, identify replacement for employer/individual premiums, design income/payroll/general-revenue contributions, specify state relationships, and handle program transition and reserves. It must reconcile private premiums, wages/taxes and the existing insurance market without double counting. Federal net borrowing is **not computable** from this table.

We also tested the idea that unpaid bills and charity care should enter as new tax savings. They **cannot** be credited at face value: gross write-offs differ from resource costs, recoveries and legitimate tax deductions. Paying a formerly unpaid hospital bill may improve provider finances but transfers the payment to the new payer. Likewise, **\$86.52B** of FY2024 measured gross Medicare/Medicaid/CHIP improper payments is **not a fraud estimate** and not automatically recoverable savings.

N.5 Consolidated original section 5 (historical)**5. Earlier diagnosis and long-run human value**

The model's original question has evolved into something larger than an insurance accounting exercise: What happens if substantially more residents receive comprehensive care, identify disease earlier, complete follow-up and avoid preventable complications over decades? The benefits are likely to emerge on different clocks. They have **not** been assumed away just because we refuse to invent national cash offsets.

Window	Expected system activity	Outcomes to count separately from dollars	What cannot yet be claimed
Years 1-5	Enrollment, initial checkups, overdue screenings, diagnostic follow-up, treatment starts, dentistry, staffing expansion	Wait times, care completion, early/late-stage diagnosis, emergency reliance, patient debt, referral completion, harms of testing	That diagnoses or costs immediately decline

Window	Expected system activity	Outcomes to count separately from dollars	What cannot yet be claimed
Years 6-10	Repeat screening and sustained treatment; long-term chronic-disease interventions begin to show effects	Cancer stage distribution, diabetes incidence/delay in eligible cohorts, acute admissions, risk-adjusted cardiovascular outcomes, hospital capacity and adverse events	Universal 10-year medical-cost break-even
Years 11-20	Earlier treated groups age with continuous care; chronic and long-term-support services stabilize	Disease complications, disability, mortality, functioning, family caregiving, disparities, lifetime financial security	A specific national number of lives saved without linked outcomes
Years 21-30	Continued prevention, age-related care, and potentially longer-lived population	Quality and length of life, healthy years, cumulative severe-disease burden, lifetime care use and finances	That living longer automatically reduces lifetime healthcare spending

Actual national screening scale already established The Census **2025 resident population** used in our cohort work is **341,784,857**. Among **120,893,621** people ages 45–75, applying the CDC’s observed **2023** colorectal up-to-date rate of **67.4%** to a 2025-sized cohort, and testing a hypothetical +10 or +20 percentage-point improvement, implies **12.09M or 24.18M** more people current on screening. This is a **person-count target**, not annual colonoscopies. For mammography, distinct female 40–49 and 50–74 cohorts suggest **7.25M to 11.95M** additional people current under the specific tested assumptions. The groups **overlap with colorectal and other clinical cohorts**; they are never added to imply unique patients nationwide.

For mammograms, the Year-5 hypothetical incremental **4.35–7.17M procedures**, inclusive of biennial repeats, is approximately **9.65%–15.91%** of the FDA’s roughly **45.08M annual reported national mammography procedures**. Those ratios are scale markers, **not estimates of vacant appointment capacity**. Depending on FIT versus direct screening colonoscopy, additional endoscopy workload is drastically different; positive FITs also demand prompt completed diagnostic colonoscopy. This service-specific work is detailed in Steps 122–124, with neither a new cost line nor a fabricated national provider-capacity guarantee.

Clinical studies support **plausible improvements in properly selected participants**: the NIH diabetes-prevention follow-up reported reduced/delayed diabetes onset over ten years in an enrolled high-risk group, and the SPRINT randomized trial found fewer cardiovascular events in a defined high-risk hypertension group, with treatment adverse effects requiring monitoring. Neither effect can be copied onto all U.S. residents. A screening program must also account for false positives, overdiagnosis, access to definitive tests and appropriate treatment.

The two separate ledgers we need

- **Health and social value:** people receiving wanted care, reduced avoidable disability/deaths, quality-adjusted life years, work ability, financial protection and caregiver time. These may justify the policy even if national medical expenditure rises.
- **Net healthcare cash:** new screening + diagnostic workup + navigation + early treatment + longer-life ongoing care **minus** documented avoided advanced treatment and emergencies. Count cost and outcomes for the same comparable population and timeline. The current model

credits **\$0 in unverified clinical cash savings**, not because there are no potential savings, but because no national causal estimate has been established without double counting extra care already budgeted.

N.6 Consolidated original section 6 (historical)

6. Regulated prices are possible; arbitrary cuts are not

The design calls for a **national negotiated/regulated service schedule**, informed by the actual lower-price experiences of European systems while adapting to the U.S. service mix. This is not the claim that every EU nation uses one identical dollar price per procedure or that transplanting nominal foreign prices across the board would preserve U.S. delivery capacity. Currency conversion, purchasing-power levels, service coding, case-mix, staffing, rural access, teaching costs, drugs and supply chains matter. The correct U.S. schedule compares **matched services and all-in net reimbursement**, with geographic/case adjustments and a provider-viability floor.

There is evidence of large U.S. private-versus-Medicare price variation, especially for hospitals (CBO/RAND), and CBO finds that service price caps can lower prices under particular designs. But the 2026 MedPAC evidence shows that many facilities have thin or negative operating margins, especially some rural hospitals. A nominal 20% commercial-hospital fee reduction is therefore an **aggressive sensitivity**, not an automatic achievable saving. The actual price system needs protections for:

1. Rural, safety-net and low-margin hospital survival; emergency coverage and geographic access.
2. Primary care, specialty services and workforce recruitment/retention; no blanket assumption of spare clinicians.
3. Home health, nursing and disability support, where quality is sensitive to staffing.
4. Real net drug procurement and dispensing costs, without counting existing Medicare drug negotiation savings twice.
5. Service quality, waiting times, case severity and provider-induced volume responses; independent delivery should remain financially workable.

The policy ambition could therefore be **fiscally expensive and socially valuable**; there is no basis yet to declare it either a failure or a self-financing bargain.

N.7 Consolidated original section 7 (historical)

7. The remaining national break-even and decision tests

Under the conditional middle assumptions, D would need **\$15.681T of additional net, nonduplicative offsets over 30 years** beyond those already entered **just to equal A's aggregate healthcare spending**. Mechanically, if an additional offset scaled exactly like the original 2024-expenditure/rollout factor, this equals roughly **\$246B per 2024 baseline year** on that specific model scaling. It is **not** an observed annual opportunity, a requested price cut, or a federal revenue requirement. For the first decade the modeled gap is **\$4.188T**, with earlier-year and transition effects requiring different timing.

We do **not** have to force the program to break even as its only criterion: the U.S. could rationally choose to spend more to cover more services and prevent suffering. But we must state the price and its financing honestly.

The remaining uncertainties that could materially change the decision are only these:

1. **Executable tariffs:** What net service-by-service prices are affordable to the public payer **and** sustainable for different provider types and regions, after behavioral adjustment? This is our

- largest explicit tested spending lever.
2. **Real financing:** Where do redirected public funds, employer contributions, individual contributions and general taxes go, and what genuinely replaces household premiums/out-of-pocket payments? A public expenditure increase is not a full tax score.
 3. **Coverage utilization and transition:** Are the provisional 6% additional recurring care, delayed-demand wave, 3% catch-up cap and 1% capacity investment realistic, especially with 26 benefits? Test nonduplicative encounter/service units.
 4. **Actual care-delivery capacity:** Staffed local slots, facility operating economics, clinician incentives, rural access and referral completion—rather than dividing patient counts by national facility totals and asserting capacity.
 5. **Net operational efficiency:** Prove administrative replacement cost, provider workflow changes, pharmacy/PBM net savings and identifiable payment-integrity recovery **once each**, after transition expenses and existing-law baselines.
 6. **Longitudinal clinical value:** Follow disease-specific eligible cohorts and matched comparisons so earlier detection and continuity are credited for demonstrated outcomes and net resource costs; include false positives, extra treatment and longer survival.

Priority for the next national revision: build one integrated implementable national price-and-financing test using those six gates and update A/B/C/D one time. If the estimated change does not move the national result or implementation feasibility, do not investigate it in another long branch. The first full draft of a policy recommendation should compare **cost, payer distribution, access/outcomes and viability together**, not just the smallest cost number.

N.8 Consolidated original section 8 (historical)

8. Assumptions, audit trail and prior-result reconciliation

Exact calculation convention For a horizon of N simulated years, let A_t be original baseline annual national expenditure in \$T, $B0_t$ the original universal/current-price expenditure before the new administration offset, and r_t be the five-year rollout multiplier. Use the 2024 denominator **5278.588B**:

$$W_N = \sum_{t \leq N} (A_t \times r_t) \quad [\$T]$$

$$\text{PriceReduction}_N = (\text{ScenarioPrice2024}_B / 5278.588) \times W_N$$

$$\text{AdminReduction}_N = (\text{ScenarioNetAdmin2024}_B / 5278.588) \times W_N$$

$$A_N = \sum A_t$$

$$B_N = \sum B0_t - \text{AdminReduction}_N$$

$$C_N = A_N - \text{PriceReduction}_N$$

$$D_N = \sum B0_t - \text{PriceReduction}_N - \text{AdminReduction}_N$$

This is a simplified expenditure-proportional extrapolation, **not a claim** that 2024 commercial payer mix or service prices will remain constant for three decades. The units are correct because each ratio is dimensionless and W_N is \$T. For 30 years: $\sum A_t = 347.901099T$, $\sum B0_t = 373.561245T$, $W_{30} = 336.156537T$, middle price credit 5.483936T, middle admin credit 4.494953T, and hence $D_{30} = 363.582357T$.

What superseded what

- The earlier **Step 48 “base”** reported **+\$9.44T** D–A over 30 years, relying on a uniform 10% reduction to an assumed 45% of all national spending and repricing some new care. Its formula remains reproducible but the assumed eligible pool was never validated.
- Its earlier **“optimistic”** case reported **–\$18.35T** D–A over 30 years, combining much broader assumed price reductions with an unverified eventual prevention cash offset. It is **not** a cred-

- ible current savings prediction and was not carried into this consolidation.
- **Steps 119-120** replaced the repricing base with actual CMS 2024 private-insurance-financed service categories and bounded hypothetical cuts. **Step 121** added only a distinct, conditional net private nonmedical administration credit. **Steps 122-124** established health/capacity indicators but **did not book unsupported cash savings**. Consequently, the current middle figure is **+\$15.68T**, not either older figure.
 - The original source Excel workbook has **not been overwritten** by this document. This consolidation computes the corrected figures from its reproduced annual row outputs and explicitly specified new savings formulas. Step 124's supplementary screening schedule **has not been merged** with the inaccessible authoritative Step 107 demand register; claims of a completed patient/service-level costing would be premature.

Evidence and original project artifacts Public primary evidence

- CMS National Health Expenditure Accounts, historical data and 2024 payer/service ZIP — national baseline, service/payer spending, insurance administration.
- CBO: The Prices That Commercial Health Insurers and Medicare Pay for Hospitals' and Physicians' Services and CBO: Policy Approaches to Reduce What Commercial Insurers Pay — rate differences and the conditions under which caps change prices.
- MedPAC March 2026 report, hospital payment chapter — provider operating-margin and access risk.
- U.S. Census Bureau 2025 national single-year age/sex resident estimates — resident and eligibility cohort denominators.
- CDC cancer screening, 2023 NHIS and FDA MQSA mammography statistics — observed screening rates and national procedural scale.
- NIDDK Diabetes Prevention Program outcomes and SPRINT final randomized study — cohort-specific health improvement evidence, not national fiscal forecasts.
- CMS FY2024 improper-payment fact sheet — definition safeguards for fraud/error assertions.

Internal reproducibility: Original Universal_Healthcare_ABCD_2025-2054_Provisional_Model.xlsx , audit_results.json, and accompanying base provisional report; Step 119 service-payer audit; Step 120 service price bridge; Step 121 nonprice savings ledger; Steps 122-124 outcomes, headcounts and capacity integration. The national mid-case cumulative amounts were independently recalculated from original yearly A and B values using the explicit formulas above. They are **illustrative model outputs**, not verified official future expenditure estimates.

N.9 Consolidated original section 9 (historical)

9. Integrated national price-and-financing feasibility gate (October 26, 2026 continuation)

This continuation deliberately **does not create another disease, screening, hospital or county research branch**. It tests the two largest national decisions together: Could prices close the modeled expenditure gap without damaging delivery, and what would a public financing conversion actually move? It does not change the existing A/B/C/D spending scenarios or claim any new savings.

A. A national break-even threshold—not an executable price list Using the exact 30-year model scale $W_{30} = \$336.156537T$ and CMS 2024 denominator $\$5,278.588B$, the middle-case spending gap of **\$15.681258T** is equivalent to a further **\$246.239B of 2024 expenditure-base savings** if that offset grows and ramps identically to the already modeled price/admin reductions:

$$\$15.681258T \div \$336.156537T \times \$5,278.588B = \$246.239B.$$

The middle price test already assumes **\$86.113B** in 2024-equivalent commercial-service savings

and **\$70.583B** in net commercial-insurance administrative savings. If all additional savings were forced onto the existing private-insurer-financed service price pool, the total price reduction would have to be **\$332.352B**, or **22.64%** of that pool’s **\$1,468.135B** measured 2024 expenditures, on average. This is a **mathematical allocation**, not a supportable uniform percentage fee cut: dentistry, prescriptions, nursing, hospital procedures and physician services have fundamentally different cost structures.

If the remaining **\$246.239B** were instead taken only from 2024 private-insurer hospital and physician/clinical spending, preserving the other middle-case category adjustments and applying the same further percentage-point cut to both sectors, the extra reduction would be **23.14 percentage points** across their combined **\$1,063.995B** payer base:

Purely algebraic comparison	Hospital private-insurance fee cut	Physician/clinical private-insurance fee cut
Previously modeled	10.00%	5.00%
conditional middle		
Further cut needed if these two sectors alone close the remaining 30-year gap	+23.14 points	+23.14 points
Implied break-even rates	33.14%	28.14%

This is **not a provider-safe tariff**. It is well beyond the middle test and requires verified cost accounting, service-level reimbursement, volume, geography, teaching/safety-net adjustment and provider behavior before it can be treated as feasible. It may reduce access, close facilities or worsen staff shortages. CBO documents ways price controls can lower commercial payments while explaining associated provider-supply and behavioral effects; see its policy approaches. The national conclusion is that **we cannot credibly promise mathematical break-even merely by selecting a sufficiently large reimbursement haircut**.

Administration alone does not solve this either. Removing **100% of the entire 2024 private-insurance nonmedical expenditure**—including amounts that represent reserves, operating expenses and underwriting results, with **zero replacement public administration**—is an impossible zero-cost-administration ceiling. Relative to the middle assumption’s 40% net reduction, even that would add only **\$6.742T** of 30-year modeled savings, leaving approximately **+\$8.939T** more national spending than A with the middle service-price assumptions unchanged. This underlines why such numbers are **limits**, not a financial plan.

B. The second distinction: changing the payer versus creating a new expense The original funding display assigned **85% of D expenditures to government**. That is a hypothetical government-sponsor attribution, and “one primary public payer” or “\$0 at the point of covered care” does not specify that attribution. Employer and employee Medicare payroll taxes today are assigned to their **business/household sponsors**, despite flowing through a public program. New dedicated contributions might be classified similarly. Some excluded/private purchases may remain; existing public programs must be absorbed. To expose the arithmetic, compare the existing **85%-government-sponsor illustration** with the distinct extreme **100%-government sponsorship of all national health expenditure**. The latter is a hypothetical sponsor-allocation boundary, **not** the inevitable or current design of a public insurer. Section 10 supplies the official underlying sponsor crosswalk.

Middle-case horizon	A: government-financed at 47.6%	D: government-financed at 85%	D: government-financed at 100%	Increase under 85% / 100% D finance
10 years (T) 33.94 64.16 75.49 * * + 30.23 / + 41.55 * * * *30years * *(T)	165.60	309.05	363.58	+143.44 / +197.98

Under those **selected hypothetical sponsor shares**, the **non-government-sponsored portion** of the 30-year modeled expenditure falls from **\$182.30T in A** to **\$54.54T at 85%-government D** or **\$0 at the deliberately extreme 100%-government D**. The net national cost increase remains **+\$15.68T under either attribution**, because how we attribute financing does not change the count or resource cost of medical services. These are not projected taxes, government deficits, or evidence that workers/employers cease sponsoring care. A real funding plan must allocate the changed burden among households, employers, states and federal government, and identify which existing premiums/taxes actually disappear.

Practical national finding: Payments flowing through a public payer can be very large while substantially replacing the premiums, contributions and out-of-pocket expenses families and employers are already paying. But a public payer does not imply that all expenses become government-sponsored in CMS accounts. We must not sell a budgetary transfer as new national spending or assume eliminated premiums and new taxes cancel household-by-household without incidence analysis.

C. What this allows us to decide now

1. **Keep universal access and all 26 benefits in the design.** Nothing in this calculation warrants dropping prevention, dental, long-term care or follow-up to make the budget appear favorable.
2. **Do not claim self-financing universal care on our present evidence.** The 30-year middle gap remains **+\$15.68T**; the 30-year three-test range remains **+\$7.59T to +\$22.02T**.
3. **Treat an across-the-board 28%-33% cut to commercial hospital/clinical payments as a boundary warning, not a proposed policy.** Any tariff must clear provider viability and regional access, especially rural care, before savings can be booked.
4. **Make a real financing ledger the next necessary input:** current household premiums and out-of-pocket costs, employer-financed spending, public programs and taxes, and the replacement national contributions must be mapped on the **same year and same expenditure definition**. That is the route to an actual household/public fiscal comparison; the current 85% figure is not it.
5. **Value earlier detection explicitly but separately:** count verified improvements in functioning, complications and mortality alongside financing; only place causally defensible net medical-dollar offsets into the cash model. A program may be worth purchasing even when it is not cheaper than the status quo.

This is the **national feasibility gate**. We now know the magnitude of the remaining dollar challenge and why neither an arbitrary tariff nor a payer reclassification resolves it. The next calculation should focus on **who currently pays versus who would pay**, with the same CMS baseline and no duplicate expenditure—not another clinical screening sub-study.

N.10 Consolidated original section 10 (historical)

10. Actual sponsor-of-funds crosswalk and constrained transition ledger (October 26, 2026 continuation)

This corrects and advances the financing discussion using **CMS Office of the Actuary's actual 2024 sponsor data**. In CMS terminology, a **payer/program** (Medicare, Medicaid, private insurance, out-of-pocket) is not the same as the **ultimate sponsor** (household, private business, federal government, state/local government, other private revenue). Sponsor categories below are mutually exclusive and sum to national spending; payer/program amounts **must not be added** again. Source: CMS National Health Expenditure Accounts 2024, 2024 NHEA research article and Exhibit 4, written by the CMS NHEA team, and CMS 2024 sponsor methodology, pp. 29–31.

A. Verified 2024 sponsorship before any hypothetical reform

Ultimate sponsor	Observed 2024 spending (\$B; one-decimal publication precision)	Share of the \$5.2786T total
Federal government	1,652.0	31.3%
State and local governments	859.7	16.3%
Households	1,458.9	27.6%
Private businesses	967.4	18.3%
Other private revenues/sponsors	340.5	6.5%
Total	5,278.6	100%

The individual published cells sum to **\$5,278.5B**, compared with the published **\$5,278.6B** national total due to decimal rounding. The model's original **47.6%** government share is consistent with the observed **\$2,511.7B** federal-plus-state/local sponsorship (approximately **47.6%** of NHE) in this baseline **year**. Future sponsor shares are not validated by that single year: CMS itself projects federal sponsorship rising from **31% in 2024 to 33% in 2034**. We therefore retain the model's constant 47.6% only as a controlled counterfactual, not a forward sponsor prediction.

Two common double counts now eliminated:

- Household-sponsored **\$1,458.9B** is **not all point-of-service copays**. The separately measured **\$556.6B of total out-of-pocket spending** is part of the national financing picture; households also sponsor employee-paid insurance contributions, directly purchased premiums, Medicare beneficiary premiums and the employee-side Medicare payroll tax. Do **not** add \$556.6B to the \$1,458.9B household sponsor figure or promise \$1.459T in annual household cash savings.
- Private-business-sponsored **\$967.4B** includes employer-paid health insurance contributions, employer Medicare payroll taxes and smaller worksite/related programs; it is **not simply insurance-company profit or removable administrative cost**. Medicare **\$1,118.0B**, Medicaid **\$931.7B**, and private insurance **\$1,644.6B** are **payer/program categories**, not additive new sponsors. CMS's methodology explicitly assigns Medicare payroll contributions to the worker or employer sponsor even when Medicare reimburses the clinician.

The **\$2,426.3B** combined household and private-business sponsor amount is therefore a **real annual 2024 financing base** that a reformed system would have to replace, redirect, supplement or reallocate. It is **not a \$2.426T savings opportunity**.

B. Link those observed sponsors to our 10- and 30-year A baseline—without pretending this is a forecast To see the order of magnitude while retaining the original A spending trajectory, one can distribute **A-only** national expenditure by the **fixed observed 2024 sponsor proportions**.

This is a mechanical constant-share illustration, not CMS's actual sponsor forecast. Because Exhibit 4 rounds cells to one decimal, these projections use their rounded cell sum **\$5,278.5B** to normalize shares; differences of roughly **\$0.06T over 30 years** from the original A financing table's exact 47.6% input are a minor sponsor-share approximation, **not a change to A/B/C/D expenditures**.

Sponsor under a frozen-2024-mix A-only illustration	10-year A total (T) 30 – year A total(T)	
Federal government	22.31	108.88
State and local governments	11.61	56.66
Households	19.71	96.15
Private businesses	13.07	63.76
Other private sponsors	4.60	22.44
National A total	71.30	347.90

This exhibits the scale of payments already occurring before changing coverage: under this counterfactual, **\$96.15T household-sponsored** and **\$63.76T business-sponsored** over 30 nominal years. Actual sponsorship almost certainly changes over 30 years; these are not household tax liabilities or employer premium forecasts.

C. What can and cannot be allocated under D today The financial model does compute total D cost: **\$75.49T over 10 years** and **\$363.58T over 30 years** in the middle case. It does not specify a revenue statute, payroll assessment, general-fund contribution, or replacement mechanism for private premiums. Therefore **no defensible D-specific household, employer, federal or state sponsor-dollar allocation exists yet**. Presenting one as established would manufacture a distributional result.

The one national, source-neutral identity that **is** settled is:

Cumulative financing control	First 10 years (T) Full30years(T)	
Existing-system A resources needed	71.30	347.90
Universal regulated-price D resources needed	75.49	363.58
Additional nationwide resources needed, middle case	4.19	15.68
Amount potentially redirected among sponsors	Unknown—depends on adopted financing law	Unknown—depends on adopted financing law

The earlier **+\$143.44T** 30-year government-sponsored increase assumes **85% of all D cost is attributed to government**, and **+\$197.98T** assumes **100%**. Those are sensitivity allocations, **not consequences required by a public payer** and certainly not estimated tax requirements. The observed CMS rules demonstrate the point: a publicly delivered Medicare benefit still leaves employee-paid HI payroll taxes under **households** and employer-paid HI payroll taxes under **employers** for sponsor accounting. A national program financed largely by dedicated household/employer contributions can have one payer without having a corresponding 85% or 100% government sponsor share.

Funding mechanism checklist for the next and final incidence calculation—each item must have an explicit input amount, a payer, an ultimate sponsor and a treatment of replaced charges, all on the same calendar-year baseline:

1. Existing public Medicare, Medicaid and other program amounts that become part of the universal benefit; reconcile sponsors versus payers only once.
2. Household premiums, employee payroll contributions and covered out-of-pocket charges that disappear or change under \$0 point-of-service care; retain taxes/premiums still owed.
3. Employer premiums/Medicare payroll contributions replaced or redirected into taxes or assessed contributions; identify whether reduced premium spending reaches wages, profits or prices rather than assuming employees receive it all.
4. Federal and state general-revenue obligations, state Medicaid funding conversion and any transitional public borrowing; distinguish contribution collection from who ultimately bears its cost.
5. The **net additional** national resource gap from D–A after verified provider efficiencies, with an explicit financing choice and household/business distribution—not assigned by simply relabeling a public claim as a government-sponsored claim.

National decision at this checkpoint: We have now grounded all five existing sponsor categories in observed CMS data and reconciled the old 47.6% baseline. **What remains is a political/financing design choice—not missing research about what Americans currently spend.** A fully public claims system can be financed in different combinations of household, employer and public general-fund resources. We can compare the consequences only after that choice is specified or explicitly modeled as named alternatives. The spending and health-outcome analysis otherwise remains unchanged.

N.11 Consolidated original section 11 (historical)

11. Financing alternatives: one healthcare system, four explicitly chosen funding splits (October 26, 2026 continuation)

This section completes the immediate next comparison without a separate tax-policy or disease-by-disease research project. All four alternatives pay for the **same D healthcare expenditure**; there is **no change in utilization, coverage, health benefits, regulated-price assumptions or total national cost**. They differ **only in who is assigned sponsorship of D’s additional national resources over A**. The unchanged A sponsorship from Section 10 is assumed to continue as a baseline contribution stream that can be **redirected** into a unified payer without being counted as new spending.

Not a tax proposal: These are gross, modeled sponsor-allocation scenarios. “Federal-funded” does not establish whether government would use progressive income taxes, payroll assessments, consumption taxes or borrowing, nor who ultimately bears those taxes. “Household/business-funded” describes sponsor attribution and does not set a tax rate, wage response, contribution cap, retirement exception or employer pass-through. A primary public payer and \$0 covered point-of-service treatment remain the design goals across all four choices. A new payer’s payment channel and the **ultimate sponsor** stay conceptually separate, consistent with CMS 2024 sponsorship methodology.

A. The four allocation rules

Illustrative choice	Federal share of new cost	State/local	Household	Private business	Other private
Federal general-revenue assignment	100%	0%	0%	0%	0%
Household + business dedicated-contribution assignment	0%	0%	60.13%	39.87%	0%
Federal/household/business hybrid	50%	0%	25%	25%	0%
Existing 2024 sponsor proportions	31.30%	16.29%	27.64%	18.33%	6.45%

The 60.13%:39.87% private-contribution split is **not an arbitrary claim about earning capacity**; it is the ratio of the **actual 2024 CMS household \$1,458.9B to private-business \$967.4B sponsorship amounts**. It is only a comparison control. The 2024-proportion option uses all five original one-decimal sponsor amounts, normalized by their **\$5,278.5B rounded-cell total**; rounded display percentages may sum to 100.01%.

B. Cumulative new sponsorship required in the middle case, nominal \$T The source-neutral **D–A** additional cost is **\$1.353T over five years, \$4.188T over ten, \$9.026T over twenty, and \$15.681T over thirty**. Each row below distributes **only that extra**. All other original A sponsor contributions are held constant in the illustration; they must be redirected into the new claims system as appropriate.

Allocation test	Federal, 10yr	Household, 10yr	Business, 10yr	State + other, 10yr	Federal, 30yr	Household, 30yr	Business, 30yr	State + other, 30yr
Federal-funded	4.188	0	0	0	15.681	0	0	0
Household/business-funded	0	2.518	1.670	0	0	9.429	6.252	0
50/25/25 hybrid	2.094	1.047	1.047	0	7.841	3.920	3.920	0
Fixed 2024 sponsor proportions	1.311	1.157	0.767	0.952	4.908	4.334	2.874	3.566

Values are rounded independently and may differ from row totals by about \$0.001T. For the proportional 30-year row, the displayed **\$3.566T** consists of approximately **\$2.554T state/local** and

\$1.012T other private. Every row reconciles to the identical +\$4.188T ten-year and +\$15.681T thirty-year resource requirement, and all four choices retain the same original national A/B/C/D cost path.

C. Implementation timing and the meaning for households The added expenditure is **not constant from year one**. In the existing simulated rollout the extra D–A national expenditure rises from approximately **\$78B in 2025**, to **\$483B in 2029** at the end of the five-year rollout, and approximately **\$628B in 2034**. Those are annual scenario-year amounts in that year’s **nominal** dollars, not a proposed annual levy today. A financing schedule must follow the year-specific expenses and replacement-premium cash flows, including transition costs, rather than divide the 30-year total into 30 equal 2024-dollar bills.

For example, the household/business-only option would assign **about \$2.518T of additional 10-year sponsor resources to households** and **\$1.670T to businesses**; the hybrid would assign **\$1.047T to each** and **\$2.094T to the federal government**. These figures **cannot** be converted into an honest “each family pays X” claim without taxable income distribution, employer/employee contribution rules, Medicare/Medicaid treatment, wage and benefit incidence, and which current premium and out-of-pocket charges are truly eliminated. The actual CMS 2024 **\$556.6B out-of-pocket payer total** is a funding flow to replace for covered services, not a bill that can be canceled while leaving the same care financed for free.

D. Decision: financing is a distributional choice, not a savings lever The **federal-funded** option concentrates statutory responsibility in federal revenue and could involve more federal borrowing or tax revenue; household/business incidence still depends on the federal revenue mechanism. The **household/business-funded** option keeps the nominal additional sponsorship outside government but does not guarantee low household costs or neutral wages. The **hybrid** explicitly spreads new sponsor responsibility; the **proportionate** option preserves the old sponsors’ relative distribution, including state/local obligations. None creates a national expenditure reduction by itself.

What we have established now:

1. The **2024 starting sponsorship** is sourced rather than guessed; household and private-business sponsorship combined was **\$2.4263T**, separate from government **\$2.5117T** and other private **\$0.3405T**.
2. The **additional national resources** to fund universal D are explicitly **+\$4.188T/10 years** and **+\$15.681T/30 years** in the middle case, regardless of funding mix.
3. Four **arithmetic allocation examples** now assign that additional cost without double counting existing sponsorship or falsely equating a public payer with government sponsorship.
4. The actual **household net gain or tax burden** is **not established** by a gross sponsor allocation. It can only be derived after a specific revenue base and progressive/flat contribution design is chosen and compared with the premiums, copays and employer spending it replaces.

Next bounded national decision test: Compare an explicitly defined household affordability/ability-to-pay rule against the gross contributions above, including how much preexisting premium and out-of-pocket burden disappears and which taxes would replace it. Report who is better/worse off by income band and employer type, using the **same annual totals** and without adding a new medical cost or another clinical research branch. Until a contribution schedule is defined, those distributional results remain **unknown**, not zero.

N.12 Consolidated original section 12 (historical)

12. Household and employer affordability: a revenue-normalized illustration, not a tax proposal (October 26, 2026 continuation)

This is the immediate bounded affordability test requested by the preceding section. It uses **one consistent 2024 spending/income base** to build a hypothetical gross replacement contribution, then tests individual examples against **observed 2024 employee/employer premiums**. It also reports the **latest 2026 premium evidence separately**. No newly invented medical cost, reduced covered benefit, medical savings, behavioral response or legislative tax rate is inserted into A/B/C/D. **The examples are not estimates of the number of winners/losers, poverty effects, federal revenue, tax incidence or a distributionally scored bill.**

A. What income and payroll bases could support redirected healthcare dollars? The same CMS 2024 national accounts used in Section 10 show **\$1,458.9B household sponsorship** and **\$967.4B private-business sponsorship**; together they already finance **\$2,426.3B** per year. The independent **BEA revised calendar-2024 personal income** total is **\$24,905.9B**; **BLS QCEW calendar-2024 private-sector wages** total **\$10,055.481B**. The latter covers jobs subject to the relevant employment-data programs, **not all possible tax/assessment income**, and the former contains incomes beyond employee wages. Sources: BEA revised NIPA personal income table, November 2025, BLS 2024 QCEW private wages, CMS 2024 sponsor methods.

For one **mechanical benchmark only**, imagine replacing every dollar of current household health-care sponsorship with an assessment on **all** BEA personal income, and replacing every dollar of current private-business healthcare sponsorship with an assessment on **all** QCEW private wages. The resulting **gross replacement** rates—not new taxes on top of existing health spending—would be:

Full 2024 sponsor-pool replacement	Amount redirected	Hypothetical assessment base	Gross replacement rate
Households	\$1,458.9B	\$24,905.9B personal income	5.86%
Private businesses	\$967.4B	\$10,055.481B private payroll	9.62%

Our middle-case D–A national **30-year** gap of **\$15.681T** equals **\$246.239B of 2024-baseline expenditure** only under the previously defined 30-year national spending/rollout scaling. It is **not an additional \$246B spent in actual 2024, nor an annual tax requirement that stays constant for 30 years**. Under Section 11's **50% federal / 25% household / 25% business** incremental-cost split, its 2024-equivalent financing test allocates **\$123.120B federal**, **\$61.560B household**, **\$61.560B business** on top of the amounts being redirected.

Hybrid illustrative base-year-equivalent financing	Sponsor amount including redirected 2024 obligations	Rate against 2024 income/payroll comparison base
Households: \$1,458.9B existing + \$61.560B conditional additional	\$1,520.460B	6.10% of broadly defined personal income
Private businesses: \$967.4B existing + \$61.560B conditional additional	\$1,028.960B	10.23% of private-sector payroll
Federal incremental assignment beyond existing federal sponsorship	\$123.120B additional equivalent	No derived federal tax rate

These are **gross contribution equivalences** under an unrealistically broad, uniform tax base. They **do not include income exemptions, tax deductions, income-bracket progressivity, different treatment of proprietors, firm payroll exemptions, a separate Medicaid/state transition, or actual future income/payroll growth**. Any exclusions shrink the base and require higher rates elsewhere or a different federal contribution. Actual phase-in finance must be computed **year by year** and matched to the appropriate policy-year wages/income, not by holding these normalized percentages forever.

B. What employees currently pay: 2024 comparable-year evidence KFF's **original 2024 Employer Health Benefits Survey** interviewed **2,142** private and nonfederal public firms with at least three workers. The table is for **covered employees**, not all households or all workers; "smaller" means firms with **3-199** workers in this survey, "larger" **200 or more**. It is not stratified jointly by individual family income and the exact coverage type. KFF 2024 survey.

Employer plan benchmark, observed 2024 annual averages	Total premium	Worker-paid portion	Employer-paid portion
Family, all firms	\$25,572	\$6,296	\$19,276
Family, smaller firms	\$25,167	\$7,947	\$17,220
Family, larger firms	\$25,719	\$5,697	\$20,022
Single, all firms	\$8,951	\$1,368	\$7,583
Single, smaller firms	\$9,131	\$1,204	\$7,927
Single, larger firms	\$8,884	\$1,429	\$7,455

The **employer-paid portion is part of worker compensation costs**, not cash automatically returned to employees if the private plan disappears. Both employer premium payments and worker premiums must be counted as replaced financing, while any subsequent employer payroll contribution and employee assessment are counted **once**. The KFF table reports premium averages, **not deductibles actually paid, medical utilization, or employer-plan coverage for every U.S. resident**.

C. Household gross-affordability stress test by income and plan context Apply the **6.1048% hypothetical flat household assessment** above to **four explicitly hypothetical 2024-dollar household incomes**. Treat each household as if one worker faces the relevant KFF 2024 average premium **for illustration only**, not as a claim that those incomes were observed with those premiums. Assume worker premium for covered care disappears; **do not yet assign any savings from copays/deductibles, effects on wages, or other taxes**. Positive difference means the illustrative new assessment is **more than that worker's old premium**; negative means a **premium-only direct saving**. This is a price comparison, **not a modeled household financial outcome**.

Hypothetical annual household income	Gross contribution at 6.10%	Difference vs small-firm family premium \$7,947	Difference vs large-firm family premium \$5,697	Difference vs national single premium \$1,368
\$30,000	\$1,831	-\$6,116	-\$3,866	+\$463
\$60,000	\$3,663	-\$4,284	-\$2,034	+\$2,295
\$100,000	\$6,105	-\$1,842	+\$408	+\$4,737
\$200,000	\$12,210	+\$4,263	+\$6,513	+\$10,842

The stress test highlights a real **design problem**, not actual household winners and losers: a broad flat-income replacement might sharply benefit a low-income household currently paying a high **family** premium, yet impose a higher gross direct assessment than the old **single** premium on a lower-income single adult. This is why an **ability-to-pay rule, credits/allowances, and treatment of households without employer coverage** are necessary before anyone can claim affordability. Actual covered out-of-pocket expenses (which may be substantial) would improve the direct comparison if eliminated; income taxes, existing Medicare payroll taxes, wages, household size and remaining noncovered purchases may change it in either direction. An \$0 point-of-service goal cannot be equated with “all existing household spending disappears.”

D. Employer stress test by firm size and workforce composition Using the same **10.2328% synthetic payroll replacement rate** and KFF 2024 employer-paid per enrolled employee averages gives a simple direct-cost screen. A payroll assessment would apply based on wages, while historical employer premium spending varies by family versus single enrollment, workforce size and whether an employer offered coverage at all. The selected salaries are **illustrative**, and no employer profit, wage adjustment, tax credit or minimum wage effect is assumed.

Hypothetical individual annual wage	Synthetic employer contribution at 10.23%	Difference vs small-firm family employer premium \$17,220	Difference vs large-firm family employer premium \$20,022	Difference vs small-firm single employer premium \$7,927
\$50,000	\$5,116	-\$12,104	-\$14,906	-\$2,811
\$100,000	\$10,233	-\$6,987	-\$9,789	+\$2,306

Here negative means direct assessed cost below the old KFF average employer premium. A firm that presently **does not offer health insurance** has no old employer premium to replace for those workers, yet could face a new payroll assessment—although employer Medicare HI payroll taxes already paid would need to be credited/reconciled if subsumed by the new system. Similarly, a firm with mainly single workers and high wages may pay more than its old premiums. **Neither the number of affected firms nor their net profit/wage effects are calculated.** A payroll financing statute would need a treatment for microbusinesses, self-employed people, state/local public employees and nonoffering employers.

E. Current 2026 coverage-cost context—do not silently mix the years KFF’s **October 2026 Employer Health Benefits Survey** of 1,937 employers (now firms with **10 or more** employees) shows that annual average **family premiums reached \$28,303**, with **\$7,471 paid by covered workers**, compared with **\$6,296 worker-paid in 2024**. For family coverage in 2026, average worker contributions were **\$9,687** at firms with **10-199** workers versus **\$6,840** at firms with **200+**. The 2026 average **single** total premium was **\$9,804**, with worker contribution **\$1,672**. KFF 2026 original survey. These newer figures indicate the 2024 benchmark is **already stale as a current household cash bill**, but **the report’s 2024 BEA income/payroll/CMS sponsor-matched rate arithmetic must not be presented as a 2026 tax calculation**. Survey small-firm definitions also changed between 2024 and 2026.

F. What is actually decided and what is still unmeasured **Established:** existing 2024 household/business sponsorship matches official CMS data; official BEA/BLS national bases can express a gross replacement-rate scale; KFF original surveys quantify present worker/employer premiums and reveal large coverage/firm-size differences; a calibrated illustration shows why income-based redistribution may create different premium-only results for families, single workers and firms. The **underlying +\$15.681T thirty-year D–A national cost and 26-benefit design are unchanged.**

Not established: a legally valid or sufficient progressive tax schedule; how many families reside in each modeled income/plan cell; family copay/deductible spending that would actually vanish; the net effect on wages or employer payroll; employer opt-out or firm closures; federal/state fiscal score; or population counts of people better/worse off. A national flat contribution **would be an especially poor affordability conclusion for people with low income and little/no current premium to offset**. We cannot infer a tax burden for them from KFF’s insured-worker averages.

Next bounded action: Convert the gross comparison into a **progressivity test with an explicit exemption/credit design**, tied to a verified distribution of personal income and employer payroll, then require its **total receipts to reconcile to the existing national funding target**. Evaluate family/single/no-offer and small/large employer cases in that single national table. Do not branch into another condition-specific healthcare study. Until the distribution and exemption base are known, a claimed population-wide affordable contribution rate remains **unverified**.

N.13 Consolidated original section 13 (historical)

13. Progressive household financing: actual IRS income distribution, reconciled to the target (October 26, 2026 continuation)

This section tests the next decision without changing any health benefits, provider-price assumptions, national A/B/C/D totals, or the chosen **2024-equivalent hybrid financing test**. It converts the **\$1,520.460B gross household sponsor amount** from Section 12 into two progressively assessed filing-unit examples, and computes what additional public funding would be needed if rates were kept lower. It is a distributional funding-capacity calculation, **not a proposed tax**, a scored bill or an estimate of actual household net costs.

A. Measured 2024 tax-return base differs from broad personal income The IRS **tax-year 2024, mid-November 2025 (cycle 47) filing-season Table 1**, published in 2026, reports **156,221,133 individual returns with \$15,880.389B of total adjusted gross income including deficit/zero-AGI returns**. That is a **tax-return AGI aggregate**, not the BEA **\$24,905.9B of 2024 personal income** used for Section 12’s broad comparison. Filing-season results cover nearly all returns processed in that calendar year, not a definitive full-universe final tax-year SOI sample or every resident. IRS AGI includes a different mix of income than BEA personal income, and **a tax return can be a joint couple, one adult, or a return with dependents—it is not automatically one household**. Source: IRS 2025 filing-season statistics and methodology, IRS original Table 1 XLSX: 2024 tax year, November 20 2025, rows 11 and 13.

The table supplies counts and AGI sums for bracket boundaries at **\$50,000** and **\$200,000**, so we can calculate revenue bases from grouped data **without inventing within-bracket income distributions**:

IRS 2024 filing-unit measure	Measured aggregate
All tax returns	156.221 million
Total reported AGI, including the no-AGI/deficit column	\$15.880T
Returns in income classes \$50k or more	82.078 million
Returns below \$50k or reporting no AGI/deficit	74.143 million (47.46% of filed returns)
Returns in income classes \$200k or more	14.882 million
Sum of max(AGI – \$50k, 0) over represented returns	\$10,150.920B
Sum of max(AGI – \$200k, 0) over represented returns	\$4,572.174B

The two excess-income measures above were calculated by taking each IRS bracket's actual aggregate AGI, subtracting the \$50,000 or \$200,000 threshold times the actual return count in all brackets entirely above that threshold, and summing. This is exact **for the source's rounded/aggregated data and filing population**, subject to source revisions; no estimated average income inside a crossing bracket was necessary.

B. Two revenue-balanced-or-gap-disclosed progressive schedules Assume, purely for this diagnostic, that a **\$50,000 AGI allowance applies once to each filed 2024 individual return**, and dollars of AGI above \$200,000 face **1.5 times** the base marginal healthcare assessment. This does not currently adjust for filing status, family size, nonfilers, Social Security income excluded from AGI, tax avoidance or behavioral response.

For each filing unit with AGI x , define the assessment base as $\max(x-50,000,0) + 0.5 \times \max(x-200,000,0)$. The measured nationwide weighted base is **\$12,437.007B** = \$10,150.920B + half of \$4,572.174B (differences from displayed components are rounding). Therefore, to raise the entire **\$1,520.460B** gross replacement household target, the base rate must be **12.2253%** (up to \$200k), with an **18.3379% marginal rate** above \$200k. A rate applied on all positive reported AGI with no allowance would require about **9.50%**, versus Section 12's 6.10% on all BEA personal income; the distinct denominators explain the difference.

Same \$50k filing-unit allowance, additional 50% marginal-rate tier beyond \$200k	Base marginal rate on AGI above \$50k	Marginal rate on AGI above \$200k	2024-equivalent household receipts	Household gross-funding shortfall vs \$1,520.460B
Fully self-funding AGI-only illustration	12.23%	18.34%	\$1,520.460B	\$0
Lower-rate illustration	8.00%	12.00%	\$994.961B	\$525.499B

In the first row, national receipts mathematically reconcile to the household share of the existing financing illustration. In the second, the **\$525.499B is real within this algebra**: it must come from another sponsor or a different assessment base. If **all of it** shifted to federal financing while keeping Section 12's business gross assessment unchanged, the federal **additional** 2024-equivalent responsibility would rise from **\$123.120B to \$648.619B**, with the household responsibility falling by the same amount. This is a sponsor reassignment, not a cost saving or a claim about who ultimately bears federal taxation. Rates would be even higher if statutory exclusions removed some of the measured AGI base.

C. Household illustrations under both progressive schedules The rows below are **hypothetical tax-return AGI amounts**, not necessarily total household resources; a jointly filing couple and a single filer are treated alike here only because the illustration has not yet added filing-status allowances or dependents. The corresponding 2024 KFF premium differences are meaningful **only for an enrolled employee** and do not count existing taxes, copays, deductibles, wage shifts or remaining out-of-pocket expenses.

Assumed 2024 tax-return AGI	Full-target 12.23%/18.34% assessment	Lower-rate 8%/12% assessment	Full-target assessment minus 2024 small-firm family worker premium (\$7,947)	Full-target assessment minus 2024 single worker premium (\$1,368)
\$30,000	\$0	\$0	−\$7,947	−\$1,368
\$60,000	\$1,223	\$800	−\$6,724	−\$145
\$100,000	\$6,113	\$4,000	−\$1,834	+\$4,745
\$200,000	\$18,338	\$12,000	+\$10,391	+\$16,970
\$400,000	\$55,014	\$36,000	+\$47,067	+\$53,646

Negative premium differences are premium-only direct savings, not all-in fiscal winners; positive differences are premium-only direct increases, not proof that actual medical spending or taxes rise by that amount. The full-target option protects every filer at/below \$50k from this particular contribution but pushes substantial gross financing onto upper-AGI filers. A household with no current employer coverage cannot be evaluated by deducting a fictitious KFF worker premium. The lower-rate option softens the contribution but **does not close the national funding gap**.

D. Employer allocation and national cost remain fixed in this pass Section 12's **\$1,028.960B** 2024-equivalent private-business gross target and **10.23% QCEW private-wage mechanical comparison** are unchanged. The BLS QCEW aggregate does not identify the fraction of wages employed at firms that would qualify for a small-business allowance; no firm-size credit is imputed and no automatic payroll-wage transfer to workers is presumed. Section 11's **+\$15.681T D–A over 30 years** and the **26-benefit, five-year rollout design** are also unchanged. The 2024-equivalent figures must later be translated into the model's **annual policy-year revenues, income bases, and transition schedule**, including existing Medicare taxes and sponsor redirects; this is not yet done.

E. Result and the next bounded choice Resolved: the first progressively assessed **\$50k exemption / \$200k higher-rate** household schedule has been evaluated against actual IRS income brackets and **either closes its defined gross household funding requirement at 12.23%/18.34% or visibly leaves a \$525.50B base-equivalent gap at 8%/12%**. The arithmetic is reconciled and does not reuse the invalid broad-personal-income rate on IRS AGI.

Not resolved: whether either rate is socially/economically acceptable; distribution by family size, filing status, insurance status or employer offering; legal taxable base and exemptions; how replaced Medicare/Medicaid and employer-plan payments become offsets; changes in wages, income reporting or utilization; and whether raising the federal share produces a better **net** burden. No population-wide share of people better off is yet supported.

Deferred, not currently on the critical path: A family-size and filing-status-adjusted contribution/credit test would be necessary for an eventual tax or legislative proposal, but is **parked** at the overall feasibility decision checkpoint above. It does not change the A/B/C/D national spending result and must not displace the four remaining decision-changing gates.

N.14 Consolidated original section 14 (historical)

14. Provider viability: one national stress test of the modeled regulated prices (October 26, 2026 continuation)

This closes the first bounded viability calculation in the overall decision checkpoint. It does not research individual facilities, construct an untested national tariff, revise care benefits or assume that the government owns providers. The middle case **already** assumes reductions of **10% on existing private-insurance-financed hospital payments** and **5% on existing private-insurance-financed physician/clinical payments**, not equivalent cuts to every Medicare/Medicaid or newly covered service. The goal is to quantify when those cuts consume operating margins and what provider protection would cost the national model.

A. Provider revenue exposure and margin threshold Let p be the fraction of one provider’s existing all-payer operating revenue received from commercially insured patients, c the applicable **commercial-only** fee reduction, and m its initial operating margin as a fraction of the same total revenue. Hold delivered service volume, case mix, costs and other receipts fixed **only for this stress test**. Then total revenue falls by $c \times p$; its resulting operating margin is $(m - c \times p) / (1 - c \times p)$. To avoid an operating loss with this simple unchanged-cost structure, its starting operating margin must be at least $c \times p$. These equations are a screening rule, **not a hospital projection**: actual providers have many service and payer mixes, separate contracts and cost responses.

Illustrative fraction of all-payer revenue from commercial insurance	10% cut to commercial fees: total revenue lost	Hospital pre-cut operating margin needed for break-even	5% cut to commercial fees: total revenue lost	Physician pre-cut operating margin needed for break-even
20%	2.0%	≥2.0%	1.0%	≥1.0%
40%	4.0%	≥4.0%	2.0%	≥2.0%
60%	6.0%	≥6.0%	3.0%	≥3.0%

Example: a hospital starting at a **3%** operating margin with **40%** of its revenue exposed to a **10%** commercial price cut experiences an unchanged-volume revenue loss of **4%**; its new margin becomes $(3\% - 4\%) / (1 - 4\%) = -1.04\%$. Its clinical operations would be loss-making unless sufficient delivery-cost reductions, protected payments, additional profitable volume or other revenue changes also occur. A hospital initially at **5%** under the same payer exposure would instead finish at approximately **+1.04%**; a uniform fee change therefore does not have uniform financial consequences.

The latest MedPAC March 2026 hospital payment chapter reports FY2024 **all-payer operating margins** of **8.6%, 6.3%, 6.6% and 4.3%** across its ascending Medicare Safety-Net Index quartiles for hospitals under the inpatient prospective payment system. These are **observed group averages, not margins of every rural/safety-net hospital**; they also do **not** report each quartile’s commercial revenue fraction as the p in the hypothetical table. Crucially, **Medicare FFS margins are a different measure** and cannot be substituted for all-payer operating margin in the equation. The evidence supports meaningful heterogeneity, not an estimate of closures under our policy.

B. How protecting fragile hospital payments changes our national cost result The middle-case existing **private-insurer hospital spending** pool in CMS 2024 data is **\$558.936B**, and the modeled 10% commercial hospital reduction yields **\$55.894B in 2024-equivalent service-price savings**. If policy design exempts a portion q of that measured payment pool from the hospital reduction while maintaining every other middle-case assumption, then 2024-equivalent savings

foregone are $q \times \$55.8936B$. The existing explicit 30-year extrapolation uses $W30 / CMS2024 = \$336.156537T / \$5.278588T \approx 63.683$, so each \$1B of recurring baseline-equivalent price reduction corresponds to about **\$63.683B** across the 30-year conditional trajectory. This is the **same model scaling**, not an independently forecast new cost.

Hospital commercial-payment pool protected from the 10% fee cut (hypothetical q)	2024-equivalent hospital savings forgone	Additional 30-year D cost vs original middle case	Revised 30-year D–A spending premium
0% (original middle test)	\$0	\$0	+\$15.681T
25%	\$13.973B	+\$0.890T	+\$16.571T
50%	\$27.947B	+\$1.780T	+\$17.461T
100%	\$55.894B	+\$3.559T	+\$19.241T

No national evidence in this calculation says **25% or 50% of hospitals must be protected**; the table varies **shares of affected commercial hospital dollars**, not shares of hospital facilities. It shows the tradeoff that follows from using targeted viability floors: if we protect providers by retaining their higher existing payment, **national savings decrease unless a distinct, verified efficiency finances that protection**. Physician reductions, other service-price savings, net insurance-administration assumptions, the 26-benefit design and the baseline demand trajectory remain untouched. There is no unsupported additional clinical offset or federal deficit calculation.

C. Representative provider categories and actual status

Provider category	What the existing model tests	What remains before a viable nationwide tariff claim
Hospitals, including rural and safety-net	10% existing-commercial-payment cut; margin/exposure and exemption-cost sensitivities above	Actual provider payer mix and cost structure, emergency-service floor, uncompensated-care transition, geographic adjustments.
Independent physicians and clinical practices	5% existing-commercial-payment cut; 1%–3% revenue-exposure thresholds in the table	Actual practice overhead, staffing, specialty costs and pay-to-serve differences; willingness to accept the public schedule.
Dental, vision, hearing and behavioral health	Covered as policy scope and aggregate utilization allowance; no verified all-service fee schedule	The first usable reimbursement floors and sufficient workforce/appointment availability; no commercial-hospital benchmark can substitute.
Home care, long-term care, nursing and hospice	Covered within 26 benefits, but no provider-class-specific unit-cost certification	Labor-intensive staffing and quality requirements, payment rates and real capacity during expansion.

Provider-viability gate result: FAIL to certify one uniform national payment reduction as provider-safe; PASS the narrow arithmetic of margin exposure and national protection cost. A targeted reimbursement floor is technically representable in the national model, but deciding its actual population, eligibility and net expense requires provider-cost and payer-mix data.

The current +\$15.681T middle estimate remains the **unprotected reference case**, not a certified deliverable price list. The conceptual feasibility verdict remains unchanged: viable reform is possible in principle, a safe tariff is still unverified, and the realistic cost may rise as access safeguards are incorporated.

Next bounded national gate: Test the rollout’s aggregate staffed-throughput requirement and deferred-care queue against the model’s already stated 6% additional recurring care and 3%-of-baseline catch-up delivery cap. Do not repeat local provider-price investigations or undertake facility-by-facility research unless it changes this national capacity conclusion.

N.15 Consolidated original section 15 (historical)

15. National capacity gate: unified provider access versus staffed treatment slots (October 26, 2026 continuation)

This section includes the user’s substantive correction: **a single primary-payer system eliminates the need for a covered patient to find a physician who accepts their particular private insurer, provided the physician participates in the universal payment system.** Today, plan-specific networks can make an existing appointment unavailable to an insured person; this is a genuine access constraint distinct from total U.S. staffing. GAO’s Private Health Insurance: State and Federal Oversight of Provider Networks Varies (GAO-23-105642) documents the role of network adequacy in access; CMS Medicare Advantage network adequacy separately demonstrates that even publicly financed plans can have network requirements. We therefore **should not assume that changing the name of the payer automatically compels every provider to participate:** payment adequacy, credentialing, geography and actual participation must remain explicit.

A. Two separate capacities, counted once each

- 1. **Physically staffed capacity:** staffed clinician time, procedure rooms, nursing, equipment and beds. One payer does **not** immediately add doctors, oncology chairs, MRI hours, dentists or rural facilities.
- 2. **Patient-to-provider matching capacity:** among those existing providers, the fraction a patient can practically use under their insurance, referral and participation conditions. Removing insurer-by-insurer eligibility can expand the **accessible provider choice set** and shorten search/friction where staff have otherwise usable openings. It may improve continuity, referral completion and patient willingness to seek care. But **a larger accessible choice set does not by itself prove additional appointments were delivered nationally** if all physical slots were already filled.

For a bounded **illustrative** national matching sensitivity, define n as the old share of relevant provider capacity reachable under fragmented insurance contracts and u as the reachable share among qualified participating providers after consolidation. The ratio $u/n - 1$ measures growth in potentially reachable capacity for that population; it is **not a workforce expansion rate**. There is **no validated national n or u** in the data reviewed, and the table assumes a hypothetical **95% effective post-reform provider participation/matching share** for comparison—not the expectation that 95% actually enroll.

Hypothetical old matching share n	Hypothetical unified-payer share u	Relative increase in reachable provider options $u/n - 1$	New staffed slots proven?
80%	95%	+18.75%	No
85%	95%	+11.76%	No

Hypothetical old matching share n	Hypothetical unified-payer share u	Relative increase in reachable provider options $u/n - 1$	New staffed slots proven?
90%	95%	+5.56%	No
95%	95%	0.00%	No

The patient benefit remains important even if national net staffed throughput does not rise. In the especially favorable **85% → 95% example**, an 11.76% relative matching improvement may make reaching existing doctors substantially easier, but it cannot be substituted for an 11.76% nationwide appointment increase or an 11.76% reduction in the measured deferred-care dollar queue. The gain also depends on whether providers accept the new reimbursement schedule—which directly links this finding to Section 14’s viability test.

B. Apply the already modeled five-year demand shock once At the model’s fully rolled-out 2029 year, **A** spends **\$6.866T** at the existing trajectory and **D** spends **\$7.349T**, a **+\$0.483T** net national expenditure difference after the assumed pricing and insurance-administration effects. Using A as a rough monetary scale marker:

Existing modeling parameter	2029 illustrative baseline-dollar equivalent	What it represents
6% incremental recurring covered-care allowance	\$0.412T	Hypothesized additional care/resource demand; not an observed patient count or staffing requirement.
3% annual cap on deferred-care catch-up delivery	At most \$0.206T	A maximum hypothetical backlog-delivery value , only if enough service demand and staffed throughput are available.
Both, if nonduplicative	At most \$0.618T	A scale indicator for possible added service spending before the program’s other offsets; not a count of visits, available slots, or the modeled D–A difference.

These are **the same allowances already inside the original A/B/C/D framework**, not new cost lines. Do **not** add them again to D. Similarly, the existing **1% workforce/facility investment allowance is a spending assumption, not proof of 1% more productive staff hours**. The dollar-based deferred-care queue in the model peaks around **\$0.530T in 2030** and clears around **2036 only under its imposed capacity/throughput assumptions**. The user-observed advantage of unified provider eligibility could improve which patient reaches which existing slot, but cannot silently accelerate the queue until actual vacancy, referral and throughput data substantiate the effect.

HRSA’s State of the U.S. Health Care Workforce, 2025 projects a **141,160 full-time-equivalent physician shortage nationally by 2038**, with disproportionate nonmetro shortages. That is a **separate projected workforce shortfall under HRSA’s model**, not observed 2029 vacancies and not a plug-in to ours. It reinforces the distinction between better insurance access and enough physically available treatment capacity.

C. Capacity gate conclusion Count the unified-network benefit explicitly: patients no longer need to shop among multiple private insurers’ provider lists, and the system can improve

usable provider matching and reduce care-navigation friction. It is a core access and continuity benefit of this design, not an optional footnote. Preserve **\$0 additional modeled cash savings and \$0 confirmed additional staffed slots** for this mechanism until evidence supports real throughput or reduced operating expense; some patient-network benefit can exist even at zero national cash savings.

National feasibility result: PASS the conceptual access barrier removal; NOT YET PASS the staffed-capacity test. The 6% recurring-demand allowance, 3% catch-up cap, 1% investment allowance and planned 2036 queue clearance are **scenario controls**, not empirically certified national staffing capacity. The model's +\$15.681T central 30-year D–A spending result is unchanged. The remaining implementation proof must reconcile new service units with actually staffed slots and patient/clinician participation, rather than adding the network matching percentage to visit capacity or adding its benefits twice to existing administration/coverage savings.

Next bounded national gate: Reconcile year-by-year funding and transition from existing CMS sponsors to the single payer without redoing tax-bracket design. This is the next question capable of changing implementation feasibility; detailed payer-specific physician directories or county-by-county capacity research remain out of scope unless they materially change the national result.

N.16 Consolidated original section 16 (historical)

16. Five-year funding transfer: redirect existing sponsor dollars once (October 26, 2026 continuation)

This is a **conservation-of-funds and transition-timing illustration**, completing the bounded financing gate at the national-accounting level without devising a new personal-income tax code. The same single public payer would eventually handle the claims that several private and public payers handle now. **An increase in public-payer claims is not the same as a new health resource cost or a federal-government tax increase.** The proper comparison is **D minus A**, not D compared with zero.

A. The five existing sponsor pools, not five new taxes The CMS 2024 ultimate-sponsor observations already established in Section 10 are federal government **\$1,652.0B**, state/local governments **\$859.7B**, households **\$1,458.9B**, private businesses **\$967.4B**, and other private sponsors **\$340.5B**. Their independently rounded published cells sum to **\$5,278.5B**; normalizing those five gives illustrative national shares **31.297%**, **16.287%**, **27.639%**, **18.327%**, and **6.451%** respectively. The official CMS National Health Expenditure Accounts separate sponsor, payer and service use, and the 2024 sponsor accounting methodology attributes Medicare payroll taxes to their ultimate household/business sponsors even when a public payer spends the money.

Do not add baseline household premiums, employer premiums, Medicare/Medicaid claims and hospital write-offs as though they were independent additional sources. The CMS **\$556.6B actual out-of-pocket payments in 2024** are already included once in national expenditure; they cannot be added again to the \$1,458.9B household sponsor total as a new savings account. The intended **\$0 covered-care point-of-service charge** means current covered patient payments must be replaced with a reliably collected financing mechanism, not subtracted from provider costs without replacement.

B. Exact balancing identity for a five-year simulated transfer For each modeled year, take previously established current-system spending A_t , corrected universal spending D_t , the established five-year rollout fraction $r_t = 20/40/60/80/100\%$, and additional national resource spending

$\Delta_t = D_t - A_t$. An explicit **spending-share transfer proxy** is:

$$\begin{aligned} \text{Claims remaining with existing system} &= (1-r_t) \times A_t \\ \text{Claims routed to unified payer} &= r_t \times A_t + \Delta_t \\ \text{Both systems' expenditure} &= A_t + \Delta_t = D_t \end{aligned}$$

The **rollout fractions originally describe coverage phase-in**, and the table assumes those percentages also approximate baseline spending routed to the new payer. That is an additional transparent **accounting proxy**, not a fact: older, sicker and higher-cost populations are not uniformly distributed across coverage groups. It is sufficient to test double counting; it is **not** an actuarially validated Medicare/Medicaid transition. The same corrected annual spending inputs are retained from Section 8: $D_t = B0_t - (156.696B / 5,278.588B) \times A_t \times r_t$, with **\$86.113B price** and **\$70.583B administration** baseline-equivalent credits, rounded to display precision below.

Simulated year	Rollout fraction	Spending with existing payers (T) <i>Claims financed by existing payers</i>	Total D spending (T) * r_t <i>Extra D – A assigned to unified payer</i>	Total spending (B)	
2025	20%	4.451	1.191	5.642	78
2026	40%	3.518	2.511	6.029	165
2027	60%	2.472	3.969	6.442	261
2028	80%	1.303	5.578	6.881	366
2029	100%	0	7.349	7.349	483
Five-year cumulative	—	11.745	20.598	32.342	1,353

In the **first five years**, the unified payer's illustrative **\$20.598T of claims** consists of approximately **\$19.245T redirected from the baseline** plus **\$1.353T of additional care-system expenditure**. The remaining existing-payer spend totals **\$11.745T**. They add to **\$32.342T D expenditure**, exactly the previous five-year middle scenario subject to display rounding. This is the key accounting result: **the public insurer needs a very large operating revenue stream, but that does not mean the entire stream is a new national healthcare expense**.

C. Where the money would originate if the previously tested hybrid mix were retained For a single distributional control, **freeze the five 2024 original sponsor proportions for baseline A** and allocate **only the D–A increase** by the previously tested **50% federal / 25% households / 25% businesses** hybrid; state/local and other private sponsors retain their baseline-equivalent allocation. This results in the following **2029 sponsor-assignment example**. It does **not** assert actual taxes collected, employer wage incidence, federal debt, or CMS classification of hypothetical new levies.

2029 hypothetical ultimate sponsor	Existing A sponsor-equivalent redirected (T) <i>Extra D – A assigned to unified payer</i>	Total financing obligation (\$T)	
Federal	2.149	0.241	2.390
State and local	1.118	0	1.118
Households	1.898	0.121	2.018
Private businesses	1.258	0.121	1.379
Other private sponsors	0.443	0	0.443
Total	6.866	0.483	7.349

Sponsor cells are rounded independently to three decimals, so their displayed sum can vary from the unrounded total by about \$0.001T.

Over the **10-year** period, the same marginal-only hybrid adds **\$2.094T federal, \$1.047T household, and \$1.047T business** sponsor responsibility, totaling **\$4.188T** in additional national D–A spending. Over **30 years**, those added obligations are **\$7.841T federal, \$3.920T household, \$3.920T business**, totaling about **\$15.681T**. Those amounts are **already in Section 11**; they are restated here solely to reconcile transition years with the long-run national result. Any replacement-tax or premium collection mechanism must be separately scored; these assignments are not tax rates.

D. The precise remaining implementation financing gaps The **accounting identity passes**: it does not allocate the same baseline dollar to both modeled payment streams or count a canceled private premium as an extra medical-cost saving. **It does not verify individual Medicare/Medicaid beneficiary or claim deduplication**; those would require an actual enrollment and claims-transfer design. The **cash/legislative transition has not passed**. Before a real launch, the national plan would need to show:

1. Which existing federal/state programs and funds transfer on which dates, including Medicare, Medicaid, public employee coverage, veterans' coverage and federal benefit administration.
2. Which current private premiums, business contributions, household direct payments and existing payroll taxes cease or are replaced, with no duplicate employer and employee collections; old out-of-pocket spending is a baseline expenditure already counted.
3. How the unified payer collects replacement funds and pays providers on time during overlapping old/new obligations, run-off claims, insurer contract wind-down, reserves and IT conversion; **transition liquidity and one-time costs are not in this arithmetic**.
4. How working-age and older households, nonoffering employers, self-employed residents and low-income groups actually fare net of replaced premiums, taxes and patient charges. No favorable incidence conclusion follows solely from the sponsor totals.

Funding gate result: PASS arithmetic conservation and illustrative five-year redirection; NOT YET PASS real cash collections, provider-payment timing, legal program transfers or distributional incidence. The model's medical cost forecast is unchanged. The earlier detailed filing-status and bracket design remains parked; its necessary work belongs to an implementable financing statute, not this overall conceptual feasibility assessment.

Next bounded national gate: Value the health, disability and household-financial-protection benefit against the additional **+\$4.188T/10 years** and **+\$15.681T/30 years**, using one transparent decision threshold and no invented lives-saved or prevention cash savings. This is the final high-level gate before an overall project recommendation.

N.17 Consolidated original section 17 (historical)

17. Medical-bankruptcy and household debt protection: a necessary benefit, not a booked cash saving (October 26, 2026)

The final national-value test must account for families who face financial collapse because of medical bills even when treatment succeeds clinically. **In calendar 2025, U.S. Courts recorded 549,577 nonbusiness bankruptcy filings**, 11.2% more than in 2024. Courts do **not** classify a verified medical cause for each filing. Source: U.S. Courts, Bankruptcy Filings Rise 11 Percent, February 4, 2026.

The much-cited medical-bankruptcy figure must be stated accurately. A 2019 American Journal of Public Health study of **910 debtors filing in 2013-2016** reported **58.5% saying medical ex-**

penses contributed, 44.3% citing illness-related loss of work, and 66.5% citing at least one of the two. The contributors overlap, and the 66.5% figure **does not mean 66.5% filed solely because of hospital bills** or that a universal payer would prevent 66.5% of all bankruptcies. Mechanically applying the older survey percentages to 2025's 549,577 filings would yield approximately **321,500 bill-associated** and **365,500 bill-or-income-loss-associated cases**, but **neither is a measured 2025 medical-bankruptcy count**. Source: Himmelstein et al., Medical Bankruptcy: Still Common Despite the Affordable Care Act, AJPH, 2019.

Separate, direct evidence of the household hardship being targeted: KFF's 2022 nationally representative survey found **41% of adults reported some form of medical/dental debt**. Among adults with such debt, **48% reported using all or most savings, 63% cutting basic spending, and 3% reported that they or someone in the household declared personal bankruptcy within the previous five years because of health care debt**. This last figure is **not an annual bankruptcy case count** and cannot be multiplied by the population to replace U.S. Courts filings: persons, households, multi-year recall and filing cases are different denominators. Source: KFF Health Care Debt Survey, June 2022. Separately, KFF estimated **at least \$220B outstanding medical debt** in its 2024 analysis; this is a **stock of obligations**, not new annual national medical spending or a newly realizable \$220B savings line. Source: KFF, The Burden of Medical Debt in the United States, February 2024.

Effect of the proposed design: Under the modeled **\$0 point-of-service charge for covered care**, financial exposure caused by deductible/co-pay/out-of-network/denied-covered-provider charges should fall materially if the provider network works, services remain covered and financing is equitable. But income loss from illness, disability, uncovered costs, housing, other debts and pre-existing medical debt can still cause bankruptcy. Independent clinical access and the absence of "does this doctor take my insurance?" friction are important but distinct gains. Not every bankruptcy with a medical contributing factor would disappear. There is evidence Medicaid expansion reduced medical collections and improved financial security; estimates of its bankruptcy effect vary by study and design, so **no causal nationwide bankruptcy-prevention percentage is established for our proposed system**.

Accounting for the final value gate: Add a clearly labeled **annual number of medical-hardship bankruptcies avoided** as an unquantified outcome to estimate, alongside avoided collections, damaged credit, depleted emergency savings, delayed home/education plans, and household consumption instability. These are distributional/financial-security benefits, not free extra healthcare-budget offsets. **Booked avoided bankruptcies = not yet estimated; booked monetary savings from this channel = \$0 pending causal incidence and valuation**. The modeled **+\$4.188T/10-year** and **+\$15.681T/30-year** medical-resource spending differences stay unchanged. Avoid double counting: forgiven/restructured debt is not equivalent to avoided treatment expenditure, bankruptcy discharge reallocates liabilities rather than creating its face value in social resources, and amounts already recorded in national health spending cannot be added again.

Specific next test within the already agreed final gate: Develop one transparent annual prevented-bankruptcy scenario range only after separating the share with a medical contributor from the unknown fraction actually preventable by zero covered-service billing; pair each scenario with separately verified household welfare and administrative costs. Do not project prevented cases by directly multiplying the 66.5% survey share by future filings as though that were causation.

N.18 Consolidated original section 18 (historical)

18. Medical-bankruptcy prevention sensitivity: bills versus illness-related earnings loss (October 26, 2026)

Purpose and result. Build a **bounded, transparent sensitivity**, not a causal forecast, for the fully implemented universal-payer scenario. Retain the official **549,577 calendar-2025 nonbusiness bankruptcy filings** as a fixed reference volume, not a prediction of 2029 or future filings. The AJPH 2013–2016 debtor survey (Section 17; n=910) reported **58.5%** citing medical bills, **44.3%** illness-linked work loss, and **66.5%** either. Inclusion-exclusion reveals why simply assuming 66.5% preventable is incorrect:

Medical contributors reported among debtor respondents	Share	Mechanical application to 549,577 calendar-2025 filings	Interpretation
Medical bills, without reported illness-related work loss	$58.5\% - 36.3\% = \mathbf{22.2\%}$	122,006	Bill-linked, but not necessarily bills as the sole cause; other nonmedical factors can still exist.
Both bills and illness-related work loss	$58.5\% + 44.3\% - 66.5\% = \mathbf{36.3\%}$	199,496	Removing the bill alone might avert some filings, but the lost-income shock persists.
Illness-related work loss, without reported medical bills	$66.5\% - 58.5\% = \mathbf{8.0\%}$	43,966	This coverage design does not itself replace earnings; assign no direct bill-removal effect.
Neither of these two medical contributors	$100\% - 66.5\% = \mathbf{33.5\%}$	184,108	Assign no direct bill-removal effect.

Source provenance: AJPH 2019 original study and U.S. Courts 2025 calendar-year filings. Each row translates an older **debtor survey share** to a separate **court filing base**; this is an arithmetic bridge, **not** a finding about the causes of 2025 filings.

For scenario assumptions p_b = prevented fraction among bill-linked respondents with **no separately cited illness work loss**, and p_{bw} = prevented fraction among respondents citing **both** factors, use:

Illustrative annual avoided filings = $549,577 \times (0.222 \times p_b + 0.363 \times p_{bw})$.

Assumption set	p_b	p_{bw}	Hypothetical fully implemented filings averted per year	Share of all 2025-equivalent nonbusiness filings
Cautious sensitivity	25%	10%	50,451	9.18%
Middle sensitivity	50%	25%	110,877	20.175%
High sensitivity	75%	50%	191,253	34.80%

Do not describe these as empirically likely, low/high confidence bounds, or a certified prevention range. The chosen rates are **deliberately hypothetical levers** meant to show what

information a policy decision needs; current sources do not identify either p_b or p_{bw} for the proposed universal service and payment design. The American Economic Review study *The Economic Consequences of Hospital Admissions* found hospitalizations increased bankruptcy risk by **0.4 percentage points among insured nonelderly adults** and **1.4 points among uninsured nonelderly adults** over four years, with large earnings effects. Its estimate that hospitalization was pivotal to **about 4% and 6%** of bankruptcies in those two nonelderly subgroups is based on a **narrower causally identified hospital event**; it is neither a direct substitute for the broad medical-bill survey nor a proven prediction of bankruptcies preventable through universal coverage. This evidence makes the scenario assumptions appropriately **uncertified** rather than validated.

Integration with the national decision: Fully implemented coverage potentially reduces debt-induced legal filings, debt collection and credit disruption while lowering care avoidance. But insurance-payment redesign alone does not cover illness-caused **wage loss**, and existing debt does not disappear automatically on rollout. Do **not** scale these counts by our synthetic 20/40/60/80/100% spending-share ramp as if bankruptcy risk were uniformly distributed across enrollees; no credible simulated five-year avoided-filing total can yet be asserted. Do **not** assign face value of discharged debts, legal claims or provider write-offs as extra annual national medical savings. **Scenario counts are now quantified; empirically supportable prevented filings and incremental monetary welfare remain unestimated.** D–A national spending stays **+\$4.188T/10yr and +\$15.681T/30yr (middle)**. The remaining final gate combines this financial protection with verified health and disability outcomes rather than using bankruptcy alone to offset the modeled spending difference.

N.19 Consolidated original section 19 (historical)

19. Final national health-and-financial-value threshold and conceptual verdict (October 26, 2026)

Historical scope note, corrected by Section 20: The figures and threshold below evaluate the original **mild-price-cut** model only. They are **not** the final national financial finding for comprehensive government-set service prices. Read the corrective Section 20 and consolidated judgment before treating these figures as a policy decision.

A. The actual decision: worth paying for, not necessarily cash-saving The conditional-middle corrected D–A national healthcare **resource-spending difference remains +\$4.188T nominal over 10 years and +\$15.681T nominal over 30 years**. A policy with this cost can nevertheless be socially valuable if it produces enough **additional lifetime health and functioning**, plus independently measured financial protection, to justify the additional resource claims. But neither switching the payer nor the possibility of future prevention authorizes adding unverified dollar savings. The QALY (quality-adjusted life-year) captures **both survival and health-related quality of life**, including some disability/functioning changes; it does **not** capture every aspect of financial safety or equal treatment. CDC’s health-economic glossary describes QALYs, while the Institute for Clinical and Economic Review’s value framework uses **\$100,000-\$150,000 per additional QALY or equal-value life-year** for treatment price assessments. **This is an illustrative national policy screening threshold borrowed from treatment evaluation—not a statutory test, a measured willingness to pay by all Americans, or a mandate to ration care.**

B. One transparent national threshold calculation in comparable 2025 dollars The model’s 2025–2054 difference is **nominal**. Dividing \$15.681T by a fixed 2025-dollar willingness-to-pay rate without deflation and discounting would mismatch units. To avoid that error, use an explicit valuation sensitivity: **2% annual general price inflation, 3% real annual discount rate, 2025**

as year zero, with both parameters used **only for this value comparison**. The baseline NHE projection's 5.4%/4% annual nominal growth includes all modeled growth factors and is **not** itself an inflation deflator. Recreate each annual D–A difference from the original Base coverage-only row B0_t less status-quo row A_t, then the Section 16 credits:

```
delta_t = B0_t - A_t - (156.696 / 5,278.588) * A_t * rollout_t
PV_2025 = sum[ delta_t / { (1.02 * 1.03) ^ (year - 2025) } ], years 2025–2054
annual_equivalent_2025 = PV_2025 / sum[1 / (1.03 ^ t)], t = 0,...,29
required annual QALY-equivalent = annual_equivalent_2025 * 1e9 / dollars_per_QALY
```

This returns the following **reconciled cost threshold**, not observed improved health:

Value test	Calculated result	Interpretation
Unadjusted nominal D–A over 30 years	\$15.681T	Same Section 2/16 central result; no new healthcare cost.
Present value of D–A in modeled 2025 dollars	\$7.551T	2% assumed deflator plus 3% real time discount on each annual nominal delta.
30-year equal annual real cost equivalent	\$374.0B/year	PV divided by 2025–2054 real annuity factor 20.1885 .
At \$100,000/QALY	3.740M additional QALYs/year	Primary conservative benchmark on this valuation scale.
At \$150,000/QALY	2.493M additional QALYs/year	Alternative more generous illustrative threshold.
Spread arithmetically across fixed 2025 Census 341.785M people	3.99 or 2.66 perfect-health-equivalent days/person/year	A scale interpretation, not an assumption that gains would occur equally or that every resident gains days.

The one-year nominal difference at full hypothetical phase-in (2029) remains **+\$482.801B**, but that cannot be combined directly with a 2025-dollar QALY price without the same valuation convention. The final break-even is **not simply 2.5–3.7M prevented deaths or separate new appointments**; an added QALY is a composite amount of longer and/or healthier life. To claim the policy passes a cost-effectiveness test, a longitudinal national model must independently establish incremental, risk-adjusted and **discounted** QALYs against the A counterfactual, subtracting treatment harms and excluding improvements already realized under A. Because none has been established, **health-value gate: NUMERIC TARGET DETERMINED; BENEFIT DELIVERY NOT YET PROVEN**.

C. What we know about the kinds of gains, and what we still cannot credit

1. **Access, prevention, early diagnosis and mental health:** The existing 26-benefit design and Sections 6/15 include **specific screening headcount targets** and the genuine advantage of a unified provider-payment network with no need to locate an X-doctor/Y-insurer match. These are plausible paths to healthier life, but a completed screening, an accessible doctor and a saved QALY are **different quantities**. Detecting more disease initially can increase treatment and demand. A randomized Oregon Medicaid study found increased care use, diabetes detection/management, lower depression and financial strain, but **no statistically significant improvement in its measured physical-health outcomes over the first two years**. Source: Baicker et al., The Oregon Experiment, New England Journal of Medicine, 2013. Do not extrapolate this experiment directly to national 26-benefit lifetime coverage.
2. **Disability and caregiver welfare:** Earlier effective treatment, rehabilitation, durable equipment, home care, mental health and long-term support may improve functional independence and reduce caregiver burden. No nationwide counterfactual QALY gain, dollar productivity

gain or caregiver-hour reduction has yet been measured for this policy. If functioning is already scored in QALYs, it must not also be re-labeled as separate health value in dollars.

3. **Bankruptcy, debt and financial security:** The Section 18 hypothetical ~**50,451 / 110,877 / 191,253** annual avoided-filing sensitivities show why zero covered-care bills might be important, but **not** validated annual causal effects. Better creditworthiness, preserved savings and protection from catastrophic expenditure are real kinds of welfare to test separately from QALYs. The **\$220B KFF medical-debt stock is not an annual savings stream**, and coverage by itself does not replace disease-related wages or erase accumulated historical debts.
4. **Delivery harm and opportunity cost:** Increasing screenings without diagnostic follow-up, underfunding hospitals through unsafe fee cuts, or moving eligible people into a unified plan without real appointment capacity could undermine gains. The system must also avoid over-diagnosis, false-positive workups and inappropriate treatment. Any genuine negative health outcomes belong in the net QALY estimate.

The decision equation, with consistent present values and **without double counting**, is:

Net incremental social value

- = (\$ per QALY * incremental discounted net QALYs)
- + separately measured, non-overlapping financial-security/caregiver welfare
- \$7.551T incremental modeled medical-resource cost (2025 PV)
- any genuinely additional implementation/social costs not yet booked.

This is an **evaluation equation**, not a completed estimate: the currently unquantified outcome and additional implementation entries must not be set to favorable numbers simply to force a positive answer. Conversely, a positive healthcare-spending difference **does not establish that society should reject the proposal** when verified health and insurance-protection gains are substantial. If independent financial-security value were proven, it could lower the QALY requirement, but its value cannot be replaced with the face amount of discharged debt.

D. Close the conceptual phase with explicit gate status and recommendation

National gate	Demonstrated	Not demonstrated
1. National fee viability	Service/payer-specific price-exposure arithmetic and safety guardrails	Provider-safe uniform commercial payment changes with sustainable staffing, costs and regional protections.
2. National access and treatment capacity	Eliminating fragmented insurer-provider network matching improves coverage eligibility and care navigation in concept; catch-up demand is explicitly budgeted	Nationwide additional staffed slots, provider participation, patient-level completed care and reliable backlog clearance.
3. Five-year financing conversion	Baseline money and additional spending reconcile without double-counting at the national accounting level	A legal, timed and adequately funded transfer of federal/state/private collections, old-plan claims and net household obligations.
4. Long-run value	+\$15.681T nominal / +\$7.551T 2025-present-value medical-resource price tag, explicit QALY break-even target and bounded bankruptcy sensitivities	A validated national net-QALY increase of the necessary scale or monetized non-overlapping financial benefits.

Final high-level recommendation: CONTINUE AS A SERIOUS NATIONAL REFORM CON-

CEPT; DO NOT YET APPROVE AN IMPLEMENTATION OR ADVERTISE NET BUDGET SAVINGS. One national public payer, a broad 26-benefit package, regulated prices with provider safeguards, and no covered-care copays form a coherent **policy design hypothesis**. It may be worthwhile at a higher aggregate medical cost. Our corrected model, however, is **not** a defensible 30-year savings forecast or a verified deployable plan. The highest-value next validation outside this conceptual feasibility phase is an independent health-outcomes and provider/financing feasibility assessment using actual linked claims, staffed capacity, clinical outcomes and sponsor funding rather than further tax-bracket permutations or repetition of exploratory city-by-city research.

N.20 Consolidated original section 20 (historical)

20. Corrective test: comprehensive government-set provider prices (October 26, 2026)

Why this section materially changes the executive verdict. Government control over what medical procedures and services actually cost was the user's central proposal from the beginning. The original model labeled its approach "regulated pricing" but, in the middle case, only removed **10% from commercial hospital expenditures and 5% from commercial physician/clinical expenditures**, with small additional category adjustments. This was a **mild-price-cut test**, not a complete test of comprehensive nationally regulated medical prices. Therefore, the oft-repeated **+\$15.681T/30 years (+4.5%)** is **not a justified general verdict** on the user's proposal.

Sticker price versus real payment. A hospital might display an extreme charge, such as "\$700 for an ibuprofen," but that is not necessarily the final in-network **allowed/paid amount**. A plausible national savings estimate must compare actual prices **paid for a consistent service**, not simply treat the gap between the chargemaster and the drugstore shelf price as recoverable national spending. The broader phenomenon is nevertheless real: a 2025 JAMA Health Forum study of approximately 1.5 billion claims lines during June 2022–May 2023 reported private in-network allowed amounts averaging **246% of Medicare for hospital services and 124% for professional services**, with substantial variation by service and geography. Original JAMA Health Forum article; see also CBO's analysis of commercial versus Medicare provider payments.

A. Direct sensitivity of the existing 30-year national spending model **Hold constant** the 26-benefit coverage expansion and original demand allowances, original administrative reductions, five-year rollout and national nominal growth path. Change **only** the extent of actual commercial hospital/professional payment reduction, using Medicare-rate multiples as illustrative price ceilings, not adopted law or a provider-safe recommendation. The 2024 CMS-based private insurance spending pools previously used are **\$558.936B hospital** and **\$505.059B physician/clinical**. The original annual-equivalent price-reduction credit was **\$86.113B**, consisting of \$55.8936B hospital, \$25.25295B professional and ~\$4.96645B other unchanged categories. Across modeled growth/rollout years, \$1B of recurring 2024-equivalent price reductions corresponds to **\$63.683B in cumulative nominal 2025-2054 reductions**.

For a chosen hospital Medicare multiple H and professional multiple P, this intentionally simple sensitivity is:

```
hospital_cut = 1 - H / 2.46
professional_cut = 1 - P / 1.24
2024_equivalent_price_reduction_B
= 86.113
+ 558.936 * (hospital_cut - 0.10)
+ 505.059 * (professional_cut - 0.05)
30_year_D_minus_A_T
```

$$= 15.681268792 - (2024_equivalent_price_reduction_B - 86.113) * 63.683041276 / 1000$$

Hypothetical effective payment target	Approx. cut to existing commercial hospital payments	Approx. cut to existing professional payments	Total price savings, 2024-equivalent per year	New modeled 30-year D–A national spending
Original mild pricing case	10.0%	5.0%	\$86.1B	+\$15.68T
Hospital 200% / professional 115% of Medicare	18.7%	7.3%	\$146.1B	+\$11.86T
Hospital 175% / professional 110% of Medicare	28.9%	11.3%	\$223.3B	+\$6.94T
Hospital 150% / professional 100% of Medicare	39.0%	19.4%	\$320.8B	+\$0.73T
Hospital 100% / professional 100% of Medicare	59.3%	19.4%	\$434.4B	–\$6.50T

Interpretation: The modeled sign **can reverse** under substantially deeper payment regulation without changing the assumed covered benefits, additional care or insurance-administration savings. With professionals held at 100% of Medicare, the purely arithmetic hospital break-even is approximately **145% of Medicare**, but neither that rate nor the 100%/100% line is an endorsed national tariff. **The old claim that all plausible pricing configurations must cost 4.5% more is withdrawn.** Equally, the negative \$6.50T is **not established feasible savings**.

B. Why the test is decisive for direction but not a budget certification

1. **Data-to-model mismatch:** The 246% and 124% are study-wide averages from 2022–2023 privately insured allowed amounts. The CMS 2024 spending categories are aggregated dollars with different service mixes. Applying one common ratio across each entire category is an **illustrative sensitivity**, not a verified claims-level repricing or a measured national price elasticity.
2. **Hospitals' ability to operate:** MedPAC's March 2026 report estimates FY2024 aggregate Medicare fee-for-service hospital margins around **–12.1%**, while relatively efficient hospitals differ. A forced full Medicare tariff might endanger capacity for some providers; other providers may manage costs differently. A sustainable schedule needs service-specific cost evidence, regional wage adjustments, teaching/rural/safety-net protections, real capital needs and anti-gaming rules.
3. **Unpriced remainder:** Pharmaceuticals, hospital-administered drugs, dental care, ambulance, diagnostics, durable equipment, long-term care and the remaining covered benefits need comparable paid-amount versus cost analysis; this table does not automatically grant savings on them. Newly utilized care, changes in provider supply and shifts of volume or billing codes must also be modeled.

4. **Households and total resources:** Reducing insurance-company/hospital prices changes who receives payments and what providers can afford; it does not create the same amount of real productive capacity without validation. Some savings represent lower rents or administration; cuts past provider costs risk shortages and harm.
5. **Valuation gate is scenario-specific:** Section 19's **+\$7.551T present-value incremental spending and 2.5-3.7M annual QALY threshold** apply **only** to its original **+\$15.681T** mild-price-cut case. They cannot be represented as the threshold for stronger-price-cut designs without recalculation.

The next and only high-priority validation question is to construct one nationally representative, **provider-cost-viable, service-by-service government reimbursement schedule**—covering the full benefit package with access safeguards—and then rerun the same national budget and long-run outcomes model. Avoid more rounds of generic tax brackets, unrelated studies and repeated baselines. The corrected current verdict is **economically promising but not yet validated**: comprehensive prices could change the financial answer fundamentally; we have not shown what sustainable savings, if any, would result.

N.21 Consolidated original section 21 (historical)

21. First provider-cost calibration and protection-budget gate (October 26, 2026)

Purpose: Test the viability issue created by Section 20's deeper government-set medical prices without revising the established 26 benefits, rollout, utilization, capacity assumptions, financing, or administration credit. This is a **national payment-and-provider-cost stress**, not a certified schedule of procedure rates.

A. Actual 2024 provider economics MedPAC reports the FY2024 **aggregate Medicare FFS hospital margin at -12.1%**, while the median of its relatively efficient hospitals was approximately **-1%**. The corresponding FY2026 projections are **-10% aggregate** and **+1% at the relatively efficient median**. Its FY2024 **all-payer operating margin was +6.5%**, an importantly different accounting measure. Medicare FFS margins include assigned costs, some uncompensated-care payments and separately payable drugs; a single hospital's service mix and costs can differ sharply from the national aggregation. MedPAC January 2026 hospital presentation; March 2026 hospital chapter.

Translating only the historical aggregate arithmetic, a **-12.1% FFS Medicare margin** implies approximately **\$1.121 of allocated cost per \$1 of that revenue** (margin = (revenue - cost)/revenue). For MedPAC's efficient-hospital median at **-1%**, the analogous individual margin-to-cost translation is **\$1.01 per \$1**. **Neither is a safe nationwide reimbursement floor**, a hospital-by-hospital distribution, or the marginal cost of additional services. We cannot assume that pricing hospitals at 112.1%, 135%, or 145% of Medicare sustains every rural, emergency, pediatric, safety-net or high-acuity service.

MedPAC's physician chapter reports **98% of Medicare Physician Fee Schedule billing clinicians were participating providers in 2023**, and **99.7% of 2024 PFS claims were paid at standard Medicare rates**. Yet psychiatrist acceptance of all new Medicare patients was notably lower than for most specialties (55% among psychiatrists accepting new patients in the cited 2024 survey). Participation at today's mixed-payer volumes **does not prove** the entire population will be served at 100% of Medicare. MedPAC March 2026 physician chapter.

B. Put targeted viability protection into the existing 10- and 30-year equation Hold Section 20's commercial-hospital and professional payer reference ratios at **2.46x / 1.24x Medicare**

as illustrative study averages, retaining the exact **\$558.936B and \$505.059B** CMS 2024 private-insurer service pools. Let H and P be new effective Medicare multiples; let S be an **additional 2024-equivalent annual \$B pool for targeted support** of the converted commercial-financed hospital services, outside the quoted rate, introduced only if not already in the historical reimbursement/mission supplements. S is a sensitivity assumption—not a measured national necessity, separate spending on present Medicare/Medicaid recipients, or a new drug/supply savings line.

$$\begin{aligned}
 & \text{2024 service-price reduction (\$B)} \\
 &= 86.113 + 558.936 * ((1-H/2.46) - 0.10) + 505.059 * ((1-P/1.24) - 0.05) \\
 & \text{Incremental reduction vs original middle (\$B)} \\
 &= \text{2024 service-price reduction} - 86.113 - S
 \end{aligned}$$

$$\begin{aligned}
 & \text{10-year D-A (\$T)} \approx 4.1875823 - \text{incremental reduction} * 11.28233914 / 1000 \\
 & \text{30-year D-A (\$T)} \approx 15.6812688 - \text{incremental reduction} * 63.68304128 / 1000
 \end{aligned}$$

These are the same model controls: W10 = \$59.554820T, W30 = \$336.156537T, each divided by \$5.278588T 2024 national health expenditure. The 10-year base derives from rounded inputs and should be read as approximate. The support pool scales through rollout **exactly like the commercial-service price effect** for comparability; an all-payer or nonphased subsidy would require a different annual formula.

Illustrative effective tariffs	Extra S (\$B, 2024-equiv.)	10-year D–A	30-year D–A
Hospital 150% , professional 100% of Medicare	0	+\$1.54T	+\$0.73T
Hospital 145% , professional 100%	0	+\$1.41T	+\$0.01T
Hospital 140% , professional 100%	0	+\$1.28T	–\$0.71T
Hospital 135% , professional 100%	0	+\$1.15T	–\$1.44T
Hospital 135% , professional 100%	25	+\$1.44T	+\$0.15T
Hospital 130% , professional 100%	25	+\$1.31T	–\$0.57T
Hospital 130% , professional 105%	25	+\$1.54T	+\$0.73T

For professionals at **100% of Medicare**, purely mathematical 30-year break-even requires hospital rates of approximately **144.9%** Medicare if S=0, **133.9%** if S=\$25B, and **122.9%** if S=\$50B. At **105% of Medicare** for professionals, those break-even hospital rates become **136.0%, 125.0%, and 114.0%**. **None of these are certified safe rates.** In this scaling, S=\$25B adds about **\$1.592T over 30 years**. Every illustrated scenario still has a **positive first-decade D–A cost** despite some turning negative by 30 years: the initial rollout spike is not erased by eventual cumulative parity.

C. Unit-price schedule crosswalk across the existing 26 benefits

Benefit families (Section 1 numbers)	Candidate unit-and-cost anchor, subject to final cost floor	Verified status
Hospital inpatient, major surgery, inpatient cancer care (10, parts of 12)	DRG inclusive case rate, case-mix, wage/outlier and rural/teaching/safety-net adjustments.	Hospital aggregate sensitivity only; not a DRG-by-DRG cost-certified schedule.
ER, outpatient procedures, diagnostic facility services (6, 8, 9, 11)	APC/OPPS encounter/service package; separate truly payable drugs, implants and outliers; emergency availability payments.	Same aggregate hospital proxy; itemized bandages/Tylenol must not be counted as extra savings if bundled.
Primary/preventive, pediatric/maternity, consultation, specialist, rehabilitation and clinical behavioral health (1-5, 7, 18-20, part of 12 and 26)	Physician Fee Schedule RVU/GPCI with relevant specialty, staffing, professional risk and access protection; separate facility portion.	Professional aggregate sensitivity only; psychiatric and underserved participation unproven.
Ambulance/transport and dialysis (6, 13)	Ambulance Fee Schedule trip/area, ESRD prospective payment per eligible dialysis treatment and case adjustments.	Established CMS payment systems, not validated reform rates or volumes.
Vaccines, prescriptions, administered cancer medicines (2, 12, 14)	Actual net acquisition/negotiated drug expense plus safe dispensing and administration costs.	Do not transfer a hospital multiplier to retail/pharmacy spending or double-count hospital drug input costs.
Durable equipment/assistive devices and fitted aids (21, device portions of 16-17)	DMEPOS/procurement benchmarks , fitting, maintenance and quality costs.	One national A6402 Medicare supplier claim benchmark exists; no universal device tariff.
Home health, inpatient rehab, post-acute skilled nursing, hospice (20, 22, 24, 25)	Existing CMS HH/IRF/SNF/hospice payment units , adjusted for wage, acuity, visitation and clinical staffing.	Need distinct provider cost reports and capacity; not assumed covered by acute hospital cuts.
Long-term personal care, nonmedical navigation and social support (23, nonclinical 26)	Audited staffed hours/days or cases , wages, supervision, disability-specific need and travel cost.	No complete Medicare price analog; must build a separate cost-and-capacity basis.
Dental, routine vision and hearing (15-17)	Relevant provider procedure coding, verified practice/equipment input cost and participation floor.	No justified blanket Medicare multiplier; these 26-benefit lines remain fully in program scope.

Payment architecture: CMS Medicare Payment Systems; CMS Payment Regulations; CMS Physician Fee Schedule files. Institutional cost evidence exists in CMS HCRIS cost reports; actual hospital paid/claim figures exist in CMS Medicare Inpatient Hospitals by Provider and Service. Neither dataset is yet joined to produce the required representative **DRG-and-provider cost distribution**.

Gate result: Our model now has a measured hospital FFS average margin, documented professional participation evidence, an explicit 10/30-year cost-of-provider-protection sensitivity, and the correct service-unit families for all 26 benefits. **It does not have a provider-safe, service-specific national fee list.** The next bounded step is to **join CMS 2024 hospital Medicare inpatient provider/DRG claims to HCRIS cost/wage/case-mix reports** and test the distribution of payment-versus-cost outcomes at 130%/135%/145% Medicare with explicitly nonduplicative safety-net protections. This is a falsifiable inpatient-only first gate, not another general price-setting assumption or permission to proclaim whole-system national savings.

N.22 Consolidated original section 22 (historical)

22. Inpatient hospital/DRG payment-to-cost screening with matched federal data (October 26, 2026)

Scope and source years: This is the promised first actual-record viability screen, using **CMS 2024 Medicare Inpatient Hospitals — by Provider and Service** matched by six-digit CMS Certification Number to the **CMS 2023 Hospital Provider Cost Report**. CMS's simplified cost-report dataset currently ends at 2023; it is **not** a same-year 2024 hospital-cost dataset. The analysis tests the published Original Medicare fee-for-service inpatient cases at IPPS hospitals only. It does **not** test commercial encounters, emergency/outpatient care, professional fees, critical-access and other non-IPPS hospitals, or the other benefit families. CMS 2024 IPPS data; CMS 2023 hospital cost reports; official cost report data dictionary.

A. Full-file join and reproducible denominator

Input or matched population	Records
All 2024 published hospital-by-DRG rows	145,879
All 2024 published hospital-by-DRG discharges	4,952,481
Live 2023 hospital cost-report rows retrieved	6,109
Distinct cost-report provider CCNs	6,026
Cost-report CCNs with a valid positive cost-to-charge ratio, using latest fiscal-year-end record	4,561
Matched and usable 2024 hospital-by-DRG rows	145,586
Matched and usable 2024 published discharges	4,944,875 (99.846% of the published DRG-file discharges)
Matched IPPS hospital CCNs	2,882

The published-file share is **not 99.846% of all Medicare inpatient admissions or all U.S. admissions**. CMS public provider-by-DRG rows have a minimum cell-size suppression and omit various settings/patients. No duplicate (CCN, DRG) keys were found in the 2024 published rows. The 2023 cost file contained **81 provider CCNs with multiple records**; the analysis selected the record with the latest valid fiscal-year end. **Twelve** hospital-DRG rows were held because their matched hospital-wide cost ratio exceeded the screening cap of 2.0, and remaining unmatched rows lacked usable cost inputs. This is a large complete-public-file join, not a randomized nationally representative provider-cost study.

B. The proxy calculation and why it is not a measured service cost

For a 2024 hospital/DRG row:

estimated cost per discharge (proxy)

= 2024 average Medicare-covered submitted charge

* 2023 hospital-wide cost-to-charge ratio

2024 observed Medicare total payment per discharge

= CMS average total payment amount

hypothetical payment per discharge

= Medicare total payment * hospital tariff factor (1.30, 1.35 or 1.45)

modeled gross positive shortfall

= discharges * max(0, proxy cost per discharge - hypothetical payment)

The CMS **total payment** field includes relevant beneficiary cost-sharing and outlier payments, not just the net check written by Medicare. The 2023 cost-to-charge ratio is an **overall hospital rate derived from CMS cost-report cost and charge worksheets**, not a direct audited treatment-specific input-cost measure for each 2024 DRG. It can be distorted by variable departmental markups, cost allocation, coverage/charge mismatches, differing financial years, capital requirements, case severity, service-mix differences and cost-report corrections. Hospital and professional billings also differ. Consequently, even a very large record count cannot turn this proxy into an executable price schedule or an assurance that any individual service has its costs covered.

C. Actual-file numerical outcome, with an error-band stress Across matched rows, the discharge-weighted **estimated cost / observed Medicare total payment** ratio was **0.9302**. This number is descriptive of the chosen method and matched IPPS population, **not a measured Medicare operating margin**.

Hospital hypothetical tariff	Base-proxy discharges under estimated cost	Base-proxy gross positive shortfall	If proxy costs were 10% too low: under-cost share / shortfall	If proxy costs were 20% too low: under-cost share / shortfall
130% Medicare	8.22%	\$1.569B	14.37% / \$3.051B	22.66% / \$5.388B
135% Medicare	6.41%	\$1.240B	11.66% / \$2.445B	18.81% / \$4.397B
145% Medicare	3.78%	\$0.794B	7.53% / \$1.584B	12.71% / \$2.925B

The **10% and 20% columns are unverified proxy-undercount stresses**, not measured 2023–2024 inflation or new observed costs. Under the base proxy, **1,402 / 1,269 / 1,012 hospitals** at 130% / 135% / 145%, respectively, had at least one published DRG below proxy cost, while **109 / 82 / 55** had their **aggregate matched published DRG proxy costs** above their corresponding aggregate modeled payment. Those are different tests: cross-subsidy across services inside a hospital matters. These figures should not be extrapolated to all admissions or all providers.

Crucial countercheck: MedPAC’s FY2024 **–12.1% aggregate hospital Medicare fee-for-service margin** covers a different combination of inpatient/OPPS activity, payments and allocated costs. The above 0.9302 proxy-cost-to-payment ratio cannot be used as evidence against MedPAC or to infer a positive hospital-wide margin. This **scope/accounting difference and unknown proxy error** is a reason to withhold certification. MedPAC March 2026 report, hospital payment chapter.

D. Consequence for the national price model and next narrow gate

- Positive progress:** A real provider-and-DRG join covers nearly all discharges represented **inside this CMS public file**, and flags which hospital/DRG combinations would warrant deeper attention at 130% / 135% / 145% of Medicare. This materially improves upon treating a single national hospital margin as every facility’s break-even point.
- Not proven:** This is neither actual 2024 hospital/DRG accounting cost nor proof any proposed tariff safely funds trauma readiness, rural and safety-net hospitals, medical education, capital renewal or new universal-care demand. A favorable proxy value must not erase the measured MedPAC broader negative margin. Service-specific **cost center** data and like-for-like inpatient-only cost reconciliation remain missing.
- No unsupported subsidy booked:** The table’s per-DRG **gross** positive shortfalls are not a national support pool S; they can be offset within a provider, omit unpublished admissions,

describe the **existing Medicare FFS population rather than the converted commercial claims**, and include uncertain cost allocations. Section 21's 2025–2054 price and 5 sensitivity therefore **stays unchanged**. The national model does not gain a new verified savings line.

4. **Next bounded step:** Reconcile the 2024 IPPS case population against more granular cost-center/DRG costs or appropriately same-year HCRIS, then compare provider-level costs, payments and existing safety-net subsidies by **rural/urban, teaching and safety-net** cohorts. Only then consider a defensible inpatient tariff and explicitly separate baseline Medicare services from the newly converted commercial population. Remaining benefit-family tariffs must be independently validated before anyone treats national savings as established.

Section 22 gate status: COMPLETED AS A LIMITED FULL-PUBLIC-FILE SCREEN; IN-PATIENT PRICING NOT CERTIFIED. The dataset identifiers, joins, equations and assumptions above allow the screen to be reconstructed. Dataset results are a dated October 26, 2026 snapshot, and the public CMS sources may be revised.

N.23 Consolidated original section 23 (historical)

23. First hospital-cohort viability audit: physical geography, teaching and safety-net exposure (October 26, 2026)

Purpose and boundary: Stratify Section 22's **same 2,882 matched IPPS hospitals and 4,944,875 published 2024 Medicare FFS discharges** using independent attributes and actual **2023 hospital-wide patient-service financial statements**. This is a cohort risk screen, **not** a cost-center-level or same-year 2024 inpatient profitability reconciliation. The published IPPS file omits critical-access hospitals and other non-IPPS providers, so this pass cannot certify geographic coverage or rural access.

A. A rural/urban source-label problem detected and corrected before interpretation The simplified **2023 cost report's Rural Versus Urban = R** marker is **not a reliable stand-in for a hospital's physical nonmetropolitan location** in this cross-year join: hospitals that it tags R include New York-Presbyterian Hospital, NYU Langone Hospitals, Cedars-Sinai Medical Center, Massachusetts General Hospital and AdventHealth Orlando. **1,965,815 of 2,298,078 published discharges from cost-report-R hospitals (85.5%)** belonged to hospital ZIP codes CMS separately classifies as **metropolitan**. It would have been materially false to present the cost-report R category as physically rural hospitals. The likely role of Medicare provider/payment classification or inconsistent metadata needs documentation before that field is reused.

For geographic comparison here, use the **2024 provider ZIP-code RUCA classification**, which CMS expressly identifies as a physical-location commuting-area classification. These hospital groups are **2,079 metropolitan (4,466,393 matched discharges)**, **792 nonmetropolitan (459,449)**, and **11 with unresolved RUCA classification (19,033)**. Even the nonmetropolitan IPPS group is **not the entire rural-care system**; in particular, critical-access hospitals are not in this input population. CMS Inpatient data dictionary; CMS cost-report data dictionary.

B. Financial-service margin and 135%-Medicare proxy, by nonexclusive cohorts 2023 patient-service margin = **sum of 2023 net income from service to patients / sum of 2023 net patient revenue**, counted once per hospital in a group. This is a hospital-wide **patient-service revenue versus expense margin**, not MedPAC's 2024 Medicare FFS margin, and it does not include every category of nonpatient revenue and support. The DRG columns remain the **2024/2023 mixed-year proxy from Section 22**. Groups for geography, teaching, and Medicaid load overlap and **must not be summed together**.

Hospital cohort	Hospitals	Matched 2024 FFS discharges	2023 patient-service margin	Discharges below proxy cost at 135% Medicare	Under-cost discharges if proxy cost +20%
All matched IPPS hospitals	2,882	4,944,875	-2.42%	6.41%	18.81%
Provider ZIP	2,079	4,466,393	-2.60%	6.71%	19.58%
metropolitan RUCA					
Provider ZIP	792	459,449	-0.55%	3.49%	10.79%
non-metropolitan RUCA					
Highest quartile of reported Medicaid patient days	687	1,105,249	-7.48%	6.78%	19.85%
Lower three quartiles of reported Medicaid patient days	2,055	3,732,161	-0.62%	6.29%	18.48%
Positive resident-FTE or Medicare teaching/IME marker	1,364	3,652,931	-3.75%	6.33%	19.14%
No positive teaching/IME marker	1,518	1,291,944	+2.09%	6.63%	17.88%
reported Positive Medicare DSH adjustment reported	2,401	4,345,984	-2.98%	6.38%	18.87%
No positive Medicare DSH adjustment reported	481	598,891	+3.38%	6.60%	18.38%

Definition and denominator checks:

- The **Medicaid-load quartile** is calculated only among **2,742 matched IPPS hospitals with both 2023 Medicaid and total patient days reported**, with the top quartile beginning at **9.394% Medicaid days**. Another **140 matched hospitals**, representing **107,465 published discharges**, do **not** have a reliable ratio and are excluded from the high-versus-lower compar-

ison. A high-Medicaid-load proxy is not equivalent to a complete safety-net legal designation or a measured count of uninsured patients.

- Positive teaching/IME marker means reported **2023 resident FTE greater than zero or total IME payment greater than zero**. No positive marker includes zero and missing values and is **not** proof a hospital does not teach. CMS notes that IME is an existing payment adjustment for training-related costs. CMS Indirect Medical Education.
- Medicare **DSH is an existing low-income patient adjustment**; its absence, presence, or amount is not by itself a definitive safety-net characterization. This sample has many DSH-positive IPPS hospitals, so the Medicaid-load comparison is a more useful stress split. CMS Disproportionate Share Hospital.
- The 2023 patient-service margin was usable for **2,867 of 2,882** matched hospitals. A negative patient-service margin **does not prove insolvency**, since other income, subsidies, operating items and differences in accounting definitions are omitted. It is also not a one-to-one comparison with the 2024 DRG payments. Hospital counts and 2024 discharges come from matched public records; no all-hospital national extrapolation is applied.

C. What the new split changes, and what it does not The strongest observed warning is **financial vulnerability by mission rather than an isolated DRG ratio**. Among hospitals with reported Medicaid days, the highest-load group had a **6.86-percentage-point worse 2023 patient-service margin** than the other reported hospitals (−7.48% versus −0.62%), yet the base tariff proxy had quite similar under-cost discharge shares (6.78% versus 6.29%). The teaching/IME comparison likewise shows a materially weaker patient-service margin (−3.75% versus +2.09%) without a correspondingly dramatic difference in the narrow DRG under-cost share. This is a descriptive association, not proof of a causal relationship or a required subsidy amount.

The corrected physical-geography view does **not** show nonmetropolitan IPPS hospitals having the highest proxy deficits, but **that is not evidence universal pricing is safe for rural hospitals**: the sample excludes critical-access hospitals and other rural settings, and a hospital's DRG mix omits standby emergency capacity and community readiness costs. The cost-report R/U labels must not be used to overturn this scope limitation.

Price-design implication for our proposed system: If actual cost reconciliation supports it, a national **DRG base tariff** may need distinct, explicitly nonduplicative payments for **rural essential-service readiness, approved medical training, uncompensated/safety-net services, high-cost outliers and capital continuity**. The existing Medicare IPPS framework already has IME/DSH and geographic/case adjustments; an additional S cannot double-pay any retained supplement. We have **not calculated** valid dollar rates for these adjustments. CMS Acute Inpatient Prospective Payment System; MedPAC March 2026 hospital chapter.

Gate outcome: hospital cohort exposure mapped, national inpatient viability not certified. This step confirms several mission-related risks that a blanket Medicare multiplier cannot diagnose, and corrects a materially misleading rural label. It **does not** solve the promised same-year **2024 hospital cost-center and inpatient-specific DRG expense** reconciliation. The next bounded technical gate is to obtain **same-year, cost-center-specific HCRIS hospital cost and payment files** or an audited service-level alternative, preserving the proper DRG/payment population and existing supplements. **No changes to Sections 20-21's hypothetical national 10/30-year outcomes, commercial conversion ratios or support reserve S are justified by this cohort table.**

Consolidated judgment, updated through Section 23: Universal coverage, the established 26-benefit package, a national payer, independence from private insurer networks, and nationally set reimbursement remain a coherent reform hypothesis. The original limited-price case was **+\$15.681T nominal over 30 years**, while deeper price sensitivities can reverse its sign; none is certified as provider-safe national savings. The Section 22 actual-file inpatient DRG screen was

qualified, and Section 23 shows why: **hospital mission and patient mix expose financing risks not visible in a single average procedure multiplier**. Its matched 2023 patient-service accounts showed a **−7.48% margin in the highest reported Medicaid-day quartile** compared with **−0.62% in lower quartiles**, while the narrow DRG proxy results were closer. The cost report's R flag was also disqualified as a physical rural-location identifier; 2024 RUCA now supplies the geographic subset, still excluding key rural provider types. **The national budget and first-decade transition cost remain unchanged** because actual 2024 DRG cost-center floors and conversion from commercial payments are not yet proven. No claim of guaranteed savings, executable national tariffs, or complete financial/social feasibility follows from these limited screens.

N.108 Original research Step 108 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study — Step 108

2025-2054 A/B/C/D study | October 25, 2026 | **Status: Step 108 bounded-evidence and conditional-sensitivity checkpoint complete; national demand still unestimated**

Purpose and continuity

Resume directly from the audited Step 107 integrated demand ledger. Preserve its 120 scenario-year records, 3,600 scenario-year/event-family cells, 26 benefits, 30 canonical event families, population denominators and null numerical predictions. This document is an additive evidence and sensitivity input, not a modification of that ledger. Do not use the superseded Step 88 completion plan as the current checkpoint.

The live question: How might universal eligibility reveal clinically indicated but previously un-requested care, turn part of that need into actual requests, and interact with staffed treatment capacity? The exposure, need, request and completion stages must never be collapsed into one multiplier.

Newly inspected observations

1. U.S. CDC/NCHS, 2025 National Health Interview Survey Early Release, May 2026. The all-adult percentages reporting past-12-month cost barriers were **6.0%** for needed medical care (95% CI 5.6–6.4%), **5.4%** for needed mental-health care (5.0–5.8%), and **7.5%** for taking medication differently to save money (7.1–7.9%). These are non-exclusive survey experience margins, **not** additional persons, proven medically indicated events, or service quantities. The same report estimates **11.6%** of adults age 18–64 uninsured at interview. This differs in age and time denominator from the Step 107 CPS ASEC **7.9% all-year uninsured, all ages**, and must not be joined mechanically. Original source: <https://cdc.gov/nchs/data/nhis/earlyrelease/Early-Release-of-Selected-Estimates-Based-on-Data-from-the-2025.pdf>
2. Oregon Health Insurance Experiment, Finkelstein et al. (2012), Quarterly Journal of Economics. In a randomized lottery study of uninsured, low-income Oregon adults, Medicaid coverage increased the probability of **any outpatient visit** by an estimated **21 percentage points** (reported also as a 35% relative increase). This measures one margin of realized use over about the first year in a specific population, **not** national medical necessity or the number of outpatient visits. Source: <https://doi.org/10.1093/qje/qjs020> ; PubMed <https://pubmed.ncbi.nlm.nih.gov/23293397/>
3. Oregon Health Insurance Experiment, Taubman et al. (2014), Science. Medicaid coverage increased recorded ED use by **0.41 visits per person** (40% relative to control mean 1.02) over approximately **18 months** among lottery participants in the Portland area. Emergency use need not fall immediately when coverage expands. No inference to a 12-month, U.S.-wide

ED coefficient. Source: <https://pubmed.ncbi.nlm.nih.gov/24385603/>

4. Step 107: The 2025 Census CPS ASEC margins include about **26.67 million people uninsured for the entire year**, representing the CPS survey population (about **337.9 million**, March 2026 reference), not a validated subset of the **341,784,857** July 2025 U.S. resident population. Future mutually exclusive insurance status and scenario enrollment transitions remain unknown.

Reproducible sensitivity input — per 10,000 comparable newly covered adults

Define N = 10_000 hypothetical previously uninsured, low-income adults with Oregon-like eligibility and access circumstances. These conditional stress tests are **not** projections of national uptake, nor universal-care medically appropriate demand. Use them as an empirical reasonableness comparator to later calibrated care pathways.

Access-response test	Incremental chance of ≥ 1 outpatient visit	Incremental people with ≥ 1 visit per 10,000	Source/interpretation
Zero response	0 percentage points	0	Counterfactual floor, not empirically established
Half-Oregon response	10.5 percentage points	1,050	Pure sensitivity assumption: $0.5 \times$ observed Oregon effect
Oregon-like response	21 percentage points	2,100	External-study effect transferred only to a similar hypothetical cohort

Exact arithmetic: $\text{additional_people_with_any_outpatient_visit} = N * \text{delta_probability_in_percentage_points} / 100$. Results **cannot** be treated as counts of visits, patients needing newly indicated treatment, or staffed completions. A person may have been medically indicated for multiple services already or might receive a visit without additional medically necessary services. As an independent stress marker, transferring the Oregon ED effect to 10,000 truly comparable adults over 18 months would imply $10_000 \times 0.41 = 4,100$ additional ED encounters. It cannot be added to the outpatient-person result as unique people, applied to other ages, or spread across 2025–2054 without a time and case-mix model.

Source-matched unmet-care people and utilization from existing Step 50

Before Step 108, the 2024 MEPS HC-256 person analysis already linked **on the same respondent**, within the 2024 civilian noninstitutionalized survey, three indicators of care needed but unaffordable, actual same-type utilization, age and insurance group. We reuse it without a second data download or a fictitious person-level join to CPS/NHIS:

2024 reported unaffordable service	Weighted people reporting barrier	Among them, no recorded same-type 2024 use	Among them, at least some same-type 2024 use
Medical care	11,662,802	3,140,638 without office visits	8,522,163 with office visits
Dental care	25,064,349	17,163,074 without dental visits	7,901,274 with dental visits

2024 reported unaffordable service	Weighted people reporting barrier	Among them, no recorded same-type 2024 use	Among them, at least some same-type 2024 use
Prescription medicine	8,880,192	1,353,362 without purchases	7,526,830 with purchases

The three service flags contain **45,607,343 person-flags**, but their deduplicated union was **33,738,310 people** among **334,618,276** weighted people with valid responses on all three questions (the full person sample represented 339,797,630). One person can report several problems, and a person with some existing office visits can still lack a different needed service. The affordability question's preceding-12-month recall is not an exact match to 2024 calendar-year visits. A medically cost-barred respondent's lack of office visits does not prove lack of hospital or ED care.

The same-file INSCOV24 insurance view attributed roughly **17.81M** distinct cost-barrier respondents to any private medical coverage, **11.18M** to public-only, and **4.75M** to uninsured all year. All three figures concern the **union of unaffordable medical/dental/Rx care**; they are not solely medical-visit need or incremental care if everyone obtained insurance. Existing privately insured persons can also face financial barriers. The Step 107 CPS all-year uninsured count and 2025 NHIS age-18+ barriers are kept separate because they differ in year, survey, age universe, and measurement.

Step 50 had already run a source-matched **assumed-conversion** stress table, with one hypothetical unit per newly resolved respondent: 25%/50%/75% conversion produces **2.916/5.831/8.747M** medical-unit proxies, **6.266/12.532/18.798M** dental-visit proxies and **2.220/4.440/6.660M** prescription-purchase proxies. These are distinct service categories, not additional unduplicated people or actual clinician visits, and they cannot be added indiscriminately to the baseline. The assumed conversion fractions and unit-per-person multiplier are **not empirical response estimates**; medical reported need is not necessarily an office visit, prescriptions can be recurring purchases, and even a clinically indicated request may not be completed.

The underlying already-audited source is Universal_Healthcare_Step50_Person_Service_Unmet_Demand_Matrix.md , based on HC-256 AFRDCA42, AFRDDN42, AFRDPM42, OBTOTV24, DVTOT24, RXTOT24 and INSCOV24, with explicit overlaps and missing-response exclusions. **No recalibration or reintegration of record-level data was necessary.**

Existing MEPS dental calibration incorporated — no repeated research

The missing insured-versus-uninsured dental comparison was **already computed and independently audited** in the earlier Steps 63–65. Step 108 reuses those existing estimates as the conditional dental_attended_visit event-family input; it does not download another MEPS sample, join a new person file, or label observed cross-sectional differences causal.

Audited within-source 2024 MEPS medical-insurance groups (INSCOV24; positive 2024 person weights; the same civilian noninstitutionalized universe):

Group	Weighted people	People with a dental visit	2024 dental-use probability
Any private medical insurance	219,767,087	117,402,776	53.42% (SE 0.79 pp)
Public medical only	98,034,323	37,909,781	38.67% (SE 0.98 pp)
Uninsured medically all year	21,996,220	3,087,588	14.04% (SE 1.52 pp)
Reconciled all-group total	339,797,630	158,400,145	46.62%

Source: `step63_meps_2024_person_dental_results.json`, `Universal_Healthcare_Step63_2024_MEPS_Dental_Population_Denominators.md` and documented AHRQ HC-256/HC-254B. The weighted populations and distinct annual dental users sum **exactly** to Step 63's all-person totals. The group-specific weighted appointment totals sum to 361,292,049 versus the separately rounded 361,292,050 total (one rounded visit), consistent with the preexisting audit. The private-versus-medically-uninsured visitor-rate gap is **39.38 pp**, design SE **1.74 pp**, approximate 95% CI **35.97–42.80 pp**. It is **association**, including income, dental-benefit, health-need and supply differences; it is **not** the response to giving medical or dental coverage.

Already researched benefit-linked causal / quasi-causal dental sensitivities: Step 64 found heterogeneous low-income adult dental benefit-expansion studies suggesting roughly **+3 pp** modest and **+6 pp** robust annual visitor-probability stress cases, with an **+11.4 pp extended-period optimistic** finding that is **not** a first-year parameter. An Oregon limited-dental-benefit lottery gave about **+4.2 pp** on any dental use with $p=.27$ (not statistically significant), cautioning against assuming comprehensive dental response from medical eligibility alone. These values cannot replace evidence about actual new beneficiaries under the proposed national 26-benefit policy.

For Step 64's **2024 MEPS study-like low-income population of 28,831,311 adults ages 19–64 below 138% FPL**—not all newly insured and overlapping other cohort views—unit arithmetic is:

Conditional annual dental visitor-probability change	Net additional annual dental visitors if all 28,831,311 were exposed	One illustrative extra appointment per net new visitor	Two illustrative appointments per net new visitor
0 pp	0	0	0
+3 pp	864,939	864,939	1,729,879
+6 pp	1,729,879	1,729,879	3,459,757
+11.4 pp	3,286,769	3,286,769	6,573,539
extended-period only			

Rounded integers are from $N \times \text{change_pp} / 100$; the one/two-appointment assumptions are **not observed utilization intensities**. The denominator is the **entire hypothetical exposed group**, **not** its 2024 non-visitors and **not** the 2024 all-year medically uninsured count. A net change in annual dental visitors does not establish the gross number of first-time patients, medically indicated treatment episodes, appointments per episode, or provider completions. Step 65's dental clinical-examination and appointment-content results stay separate and must not be joined to MEPS people.

2025–2054 ledger contract: Attach this module as conditional sensitivity evidence for canonical `dental_attended_visit` (benefit 15) while retaining the original baseline visits. A/C have no universal-coverage demand increment; C can still affect affordability/participation via pricing, presently **unknown**. B/D may use `exposed_unique_people[cohort,year] × delta_annual_visitor_probability × visits_per_net_new_visitor` **only after** the actually affected dental-benefit cohort and rollout rate are identified. Where these fields are unknown, the increment remains null, **not zero**. Requiring a separate staffed-capacity and treatment-episode ledger prevents booking hypothetical requests as delivered billable work. Other 29 event families are not imputed from dentistry.

Integration audit: 339,797,630 people = 219,767,087 + 98,034,323 + 21,996,220; 158,400,145 distinct annual users = 117,402,776 + 37,909,781 + 3,087,588. The four sensitivity calculations reproduce the prior Step 64 totals to normal reporting precision. Their historical MEPS year, denominator and provider/service unit differ from 2025 CPS and NHIS, so no hidden join is made. This is a valid reused event-family calibration, not a 2025–2054 forecast.

Parameterized national calculation — no fabricated national figures

For each age, region, coverage-exposure, event-family, scenario and calendar year:

- E: unique people exposed to a relevant access change (not total population, and not a sum of overlapping insurance categories).
- I: clinically indicated, distinct unrequested events among those people, net of existing care. **Unknown** nationally.
- U: fraction of I converted into distinct requests following the access change. **Unknown**, with 0–1 its mathematical bounds, not empirically estimated national credible limits.
- F: additional clinically indicated events detected only after earlier services are completed, avoiding double counting I. **Unknown**.
- $Q = I \times U + F$: policy-marginal new requests, separately from baseline requests and prior-year pending events. F requires explicit lag/diagnostic pathway.
- C: additional safely staffed capacity for the relevant service and catchment, **unknown** nationally. completed = min(total clinically due and requested, available staffed capacity) after allocating existing service load and protected readiness. Uncompleted requests stay pending; medically indicated unrequested care is tracked separately.

For A and C, universal_coverage_access_delta is not applied; changing tariffs under C can have separate, presently unknown provider and affordability responses. For B and D, the same uncalibrated coverage exposure is applicable, but actual completed volumes may diverge because regulated prices can change supply. The observed 2025 NHIS percentages are **not** I, U, or F; neither the CPS 7.9% nor 26.67m is E without longitudinal harmonization.

Audit / integration gate

PASS: Source-year definitions; explicit comparison of 2025 NHIS, 2025 CPS and 2008 Oregon study universes; no cross-survey pseudo-join; exact per-10,000 normalized arithmetic (0, 1,050, 2,100 and separate 4,100 ED encounters); mathematically distinct access → indicated event → request → capacity chain; A/B/C/D roles documented; earlier Step 50 2024 MEPS deduplicated cost-barrier and within-person utilization controls correctly reused; preexisting source-matched Step 63 MEPS dental-person and dental-visit counts reconciled; Steps 64–65 treatment and uptake ranges reused without treating associations as causal; hypothetical conversion cases explicitly separated from causal effect estimates.

OPEN: 2025–2054 by-age and region newly covered/underinsured exposure cohorts, clinically necessary event pools, uptake/rate differences by coverage, multi-condition overlap, preventive/detection lags, safe staffed capacity and actual completions. These limits prevent validated national event estimates or changes to cost forecasts.

Impact: The integrated 120 scenario-year and 3,600 event-cell ledger is unchanged. The old Step 48 **D–A + \$9.440T** cumulative 2025–2054 difference remains illustrative and **unmodified**; no new numerical cost conclusion is supported.

Step 108 exit decision: The bounded access-response sensitivity and directly linkable 2024 baseline evidence have been integrated and audited to their **proper conditional units**. This closes Step 108’s evidence-register objective, **not** Phase 2’s numerical forecast or the future policy-beneficiary denominator. National 2025–2054 newly benefiting people, clinically indicated event quantities, actual uptake and staffed completions are **still null**, not zero. A/B/C/D financial results remain unaffected.

Next single task — Step 109: Build the **policy-marginal exposure definition** that separates currently uninsured people from underinsured people who gain specific benefits, using actual within-survey age/coverage/affordability combinations. Begin with the source-matched 2024 MEPS strata already reviewed; do not infer future exclusive Medicare/Medicaid/dual/private enrollment from

overlapping 2025 CPS margins. Declare what the 2029 assumed full phase-in means for exposure without asserting observed national enrollment or completed care. Only then apply the Step 108 conditional ranges; no repeat of Steps 50, 63–65, 107, or 108.

N.109 Original research Step 109 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study — Step 109

Define who gains a benefit before multiplying demand

Date: October 25, 2026 (Eastern)

Study: 2025–2054, all 26 benefits, A/B/C/D

Status: **Exposure definition and 2024 empirical controls complete; national policy-marginal exposure by benefit/age/year remains unknown.** This is a structural and observed-baseline checkpoint, not an enrollment or spending forecast.

1. Decision Universal insurance eligibility is different from: (a) being uninsured under today's system, (b) having insurance but being unable to afford a needed service, (c) gaining a specific previously excluded or financially inaccessible benefit, (d) asking for treatment, or (e) actually obtaining clinician capacity. One resident can gain multiple services, but is one person. The study therefore **must not** count all people under universal eligibility as newly treated patients, and must **not** assume existing private/public coverage means no new benefits.

The proposed D/B comprehensive package preserves **all 26 agreed benefit categories**. The illustrative 2029 full implementation target denotes **policy eligibility**, not an observed insurance transition, a 100% utilization rate, the completion of delayed care or guaranteed provider participation. Patient cost-sharing, covered-service adequacy, churn, provider acceptance and 2025–2054 regional benefits exposure are not empirically settled.

2. Already measured 2024 insurance and access strata — source-compatible Step 63's audited **2024 MEPS HC-256** mutually exclusive medical-insurance classification (INSCOV24) covers **339,797,630** weighted civilian noninstitutionalized people:

2024 medical-insurance status	Weighted people	Measured access problems	Policy-exposure interpretation
Any private insurance during year	219,767,087	Approximately 17.81M reported ≥ 1 of three unaffordable needs in Step 50	Already medically insured; specific cost-sharing, dental, drug, coverage and provider gaps not fully measured
Public insurance only	98,034,323	Approximately 11.18M reported ≥ 1 unaffordable need	Public medical insurance is not proof that each of 26 benefits is fully accessible
Medically uninsured all year	21,996,220	Approximately 4.75M reported ≥ 1 unaffordable need	Direct candidate stock for coverage eligibility change, not a count of new medically indicated service events

2024 medical-insurance status	Weighted people	Measured access problems	Policy-exposure interpretation
Total	339,797,630	33,738,310 distinct people with ≥ 1 measured affordability barrier, subject to valid-response restriction	Groups mutually exclusive; cost problems and service types can overlap inside one person

The **33,738,310** people are Step 50's deduplicated union of unaffordable medical, dental and prescription needs **among 334,618,276 weighted respondents with valid answers on all three**; another 5,179,354 have at least one unavailable/refused/inapplicable item. Group-specific cost-barrier counts above are rounded in Step 50 and must not be mistaken for exact independently audited microdata cells. The three detailed service-flag counts (medical 11,662,802; dental 25,064,349; prescriptions 8,880,192) sum to **45,607,343 flags, not** to 45.6 million distinct people. The 2024 recall and current-year visit counts are not perfectly time-aligned.

An optional diagnostic screen, not a policy-beneficiary count: The disjoint set of everyone uninsured all year **OR** everyone medically insured who reported at least one of these three unaffordable needs would be approximately **50.99M people** (21.996M + 17.81M + 11.18M, using rounded reported barrier strata). This number must **never** be used as a national enrollment, treatment, backlog, or true upper/lower bound. It includes uninsured people without measured need; it excludes possible insured benefit improvements without these three reported barriers, and may include insured barriers that the eventual plan will not remove. Its only purpose is to demonstrate why “uninsured count = everyone who gains access” is not an adequate exposure rule.

Dental-specific caution already established: Step 63's reported private dental-benefit indicators distinguished about **178.4M** people with at least one affirmative private dental-benefit response, **157.5M** with no affirmative response in both applicable indicators, and **3.9M** with incomplete/inapplicable information. These categories do not fully identify comprehensive dental coverage, public dental benefits, or the people receiving new benefit access. They cannot be added to the medical-insurance rows as if disjoint and cannot generate dental utilization on their own.

3. Separate the seven model age bands and six historical payer groups The Step 107 integrated ledger carries age IDs 00_17, 18_44, 45_59, 60_64, 65_74, 75_84, 85_plus and an independent six-group historical 2024 Medicare/Medicaid-oriented classification. Its last group (“other / no listed public coverage”) includes **both privately insured and uninsured**; it is not an uninsured cohort. These six groups do **not** directly equal the three INSCOV24 strata above.

The following joint denominators are therefore deliberately **UNESTIMATED** until calculated within the same original MEPS person file with age, status, relevant benefits and affordability flags: age $\times$ medical coverage $\times$ specific newly benefited service $\times$ financial barrier. Likewise, the 2025 Census CPS ASEC **7.9% uninsured all year** and **26.67M** all-year uninsured reference a different survey date and population from the 2024 MEPS **21.996M**. They may be evidence checks, not a subtraction or growth trajectory. Step 106's later resident counts beyond 2025 remain conditional population scenarios, not observed enrollment.

4. Reusable policy-marginal exposure calculation For each person $\times$ benefit $\times$ year, define **separately**:

1. `prior_benefit_financed` — whether service is actually included and payable under previous coverage, not merely whether some medical insurance exists; unknown nationally.

2. `old_financial_obstacle` — unaffordable necessary care, deductible/copay/noncovered service or another measured barrier, with measurement/clinical validation separately flagged; observed survey responses do not themselves establish a priced treatment episode.
3. `new_plan_benefit_eligible` — whether the agreed comprehensive policy covers the clinically appropriate service under its final rules; structural **yes under full B/D eligibility**, subject to phase-in, medical necessity and still-open cost-sharing rules.
4. `actual_policy_marginal_benefit` — one or more specific services that become newly accessible or better financed for that person because of the reform. **Unknown** until earlier access and exact policy terms are cross-walked.
5. `clinical_indication`, `care_requested`, `staffed_slot`, `completed_episode` — separate downstream variables. Their 2025–2054 totals remain **null**, not zero, and care completion is capped by locally available providers and existing workload.

For unique affected people, use the union of persons with ≥ 1 demonstrably gained benefit, **not** the sum of benefit-specific populations. For treatment workload, count distinct clinically indicated service events and appropriate repeat appointments by the Step 107 canonical event-family and person/event deduplication rules. One previously untreated resident may appropriately need many linked encounters without becoming many people.

Policy scenario	Existing coverage	Comprehensive eligibility	What is not assumed
A	Existing	No reform expansion	Baseline service and insurance claims are not all clinically necessary or complete
B	Expands by plan	Full design assumed by 2029	New eligibility is not instant utilization, staffed capacity or proven savings
C	Existing	No coverage expansion	Price regulation could affect out-of-pocket payment and provider supply; direction/size unknown
D	Expands by plan	Full design assumed by 2029	Coverage plus price effects cannot be added as two independent new patients or services

5. Audit, model impact and handoff Audited controls: The three 2024 MEPS medical-insurance populations sum exactly to **339,797,630**. The cost-problem union is reused from an already audited within-person Step 50, preserving missing answers and overlaps. The optional ~50.99M diagnostic screen uses mutually exclusive insurance strata but is **not** an estimate of realized reform beneficiaries. Dental benefit indicators and six legacy Medicare/Medicaid groups remain independent classification views. Different survey years, population universes and age partitions are not joined by an invented allocation factor. A/C/B/D coverage and price effects remain distinct.

Impact: This adds a definition and observational exposure register. It changes **none** of Step 107's **120 scenario-year** entries or **3,600 event-family cells**, because the true benefit-specific policy-marginal population and service conversion are still unmeasured. The earlier **D–A +\$9.440T over 2025–2054** remains an uncalibrated illustrative scenario, not a validated expenditure estimate.

Step 109 exit: Complete as an exposure-definition and observed 2024 control gate. Do not mark national policy-beneficiary estimates complete.

Next — Step 110: For material benefit classes, produce a single within-MEPS **2024 age × actual medical status × financial barrier × relevant benefit-adequacy** cross-tab (with design-based uncertainty and transparent missing states) using existing AHRQ HC-256 fields and the existing Step 50/63 code methodology. Focus first on medical office encounters, dental access and prescription purchases; avoid repeating the completed broad survey research. Only then estimate conditional 2025–2054 exposure under the agreed rollout, keeping clinical need, request and delivered treatment separate.

Primary upstream evidence already audited: Universal_Healthcare_Step50_Person_Service_Unmet_Demand_Matrix.md ; Universal_Healthcare_Step63_2024_MEPS_Dental_Population_Denominators.md ; step63_meps_2024_person_dental_results.json ; Universal_Healthcare_Step64_Dental_Access_Causal_Evidence_and_Capacity_2026.md ; Universal_Healthcare_Step107_2025_CPS_ASEC_Coverage_Margins_Report.md ; and Universal_Healthcare_Step108_Coverage_Linked_Demand_Sensitivity.md .

N.110 Original research Step 110 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study (2025–2054)

Step 110 — Joint 2024 affordability, medical coverage, age, private-dental-indicator and utilization audit

Status: Completed as a bounded, historical survey-estimation checkpoint, **not** a calibrated forecast or a new policy cost estimate. The established **four scenarios (A–D), 26 benefit pathways, 120 scenario-years and 3,600 event families remain unchanged**. In particular, the preliminary Step 48 D–A \$9.440 trillion/30-year figure has **not** been validated by this step.

2024 source: AHRQ Medical Expenditure Panel Survey, Full-Year Consolidated File HC-256, public Stata ZIP; SHA-256 653891861ec18574b07f576915e6f9e423263fc947610dc34e1bd176feff7b40.

1. Result Step 110 constructs joint, same-person 2024 survey cells for seven ages × three annual medical-insurance groups × three affordability-response states × three reported private-dental-benefit states, and attaches historical office, dental and retail-prescription utilization. Thus it can describe which measured barriers and utilization patterns coexist within source-consistent cohorts. It **cannot**, by itself, infer how many would use a universal plan, how often, or how much a 2029 rollout would cost.

Main national controls, weighted to the MEPS civilian noninstitutionalized universe:

2024 control	Weighted persons or events
Total civilian noninstitutionalized population	339,797,630 persons
Valid responses to all three affordability questions	334,618,276 persons
At least one reported unaffordable medical, dental, or prescription service, among fully valid responders	33,738,310 persons
Fully valid responders reporting none of the three	300,879,966 persons
Incomplete affordability responses (not assumed “no”)	5,179,354 persons
Office-based visits	2,410,092,512 visits
Dental visits	361,292,050 visits
Retail prescription purchases, including refills	3,029,450,238 purchases

The 33.74 million is a **distinct-person union**, not the sum of the three service-specific barriers. Its design-based standard error for the estimated percentage among valid responders is 0.31 percentage points (estimated percentage **10.08%**). Individuals with incompletely answered questions are preserved separately. The counts for specific medical, dental, or prescription barriers in the computational file are conditioned on answering **all three** questions, so they must not be mislabeled as the all-available-answer marginal counts previously reported in Step 50.

2. Medical-coverage cohort results INSCOV24 describes medical insurance in 2024: any private medical coverage during the year; public medical only; or medical uninsured for the full year. It is **not** an indicator of public/private dental coverage.

Medical-coverage status	Weighted people	Any affordability barrier among valid responders	Office-care users	Dental-care users	Rx users
Any private medical coverage	219,767,087	8.18% (SE 0.35 pp)	78.01%	53.42%	61.23%
Public medical only	98,034,323	11.72% (SE 0.50 pp)	74.53%	38.67%	65.29%
Medically uninsured all year	21,996,220	22.12% (SE 1.79 pp)	30.70%	14.04%	22.63%

Weighted distinct persons reporting one or more of the three cost barriers within fully valid responses are **17,814,455** in the private-medical group, **11,175,468** in the public-only group, and **4,748,388** in the medically uninsured group. These sum to the **33,738,310** national union within rounding. The contrast is **observational** and cannot be interpreted as a predicted coverage effect.

Survey percentages are based on a person's **at least one** recorded 2024 service use, rather than event intensity. For example, the national dental-care-user percentage is **46.62%** (SE 0.73 pp); its event total counts multiple appointments per person.

3. Age × medical insurance exposure bridge All ages in this table are AGELAST, consistent with the previous Step 63 dental-person analysis. Rounded millions are displayed for readability. A dash means **insufficient sampled people for publication**, not zero population.

2024 age	Any private medical	Public medical only	Uninsured full year
0-17	44.511 M	25.937 M	2.184 M
18-44	86.281 M	22.394 M	13.165 M
45-59	46.616 M	8.774 M	5.243 M
60-64	15.951 M	3.886 M	1.179 M
65-74	16.370 M	19.321 M	suppressed (n=10)
75-84	7.962 M	13.508 M	suppressed (n=3)
85+	2.076 M	4.214 M	suppressed (n=2)

This 21-group bridge provides the basis for attaching different policy/service pathways, with survey-weighted affordability and utilization also saved by age and insurance in the accompanying aggregate JSON. Suppressed cells must **not** be treated as zeros or used to force the age table to sum to a national total.

4. Reported private dental-benefit indicator Across the source survey, **178,379,722** weighted persons reported a private dental benefit in at least one of the two recorded interview indicators; **157,514,051** had “no” in both indicators; **3,903,857** were incomplete. The **reported** indicator is distinct from medical insurance and cannot identify the scope or continuity of public dental benefits. For example, it does **not** justify labeling everybody in the no-private-dental group “uninsured for dental care.”

The four-way cross-tab is 7 age groups × 3 medical-insurance groups × 3 affordability-response states × 3 reported-private-dental-indicator states = **189** theoretical cells. These break down as:

- **29** cells with $n \geq 100$: descriptive survey estimates.
- **15** cells with $30 \leq n < 100$: exploratory, explicitly small-sample estimates.
- **145** cells with $n < 30$: **suppressed** rather than presented as stable estimates. This includes structurally/empirically empty groups.

The source JSON also provides 21 age × medical-insurance summaries, 63 age × medical-insurance × affordability summaries, and an 18-cell bridge to the established six historical Medicare/Medicaid groups. Exposing all 189 as precise numbers would be false precision.

5. Exact reproduction and age-definition reconciliation

- Source: **19,140** raw records, **18,683** with positive 2024 person weights (PERWT24F). No person IDs or microdata rows are in the published output.
- Complex-sample approximate standard errors use **105 design strata and 264 stratum/PSU pairs**, with full-frame Taylor linearization; domain variance was **not** incorrectly computed from a domain-only subset.
- All prior Step 50 population, affordability-union, insurance-group and office/dental/Rx event-total controls reconcile. The old **six Medicare/Medicaid groups** also now reconcile exactly:

Step 50 six-group category (2024)	Weighted people
Medicare and Medicaid ever in year	12,122,796
Medicare, no Medicaid in year	57,982,414
Age 60–64, Medicaid but no Medicare	1,931,206
Age 60–64, neither Medicare nor Medicaid	16,754,392
Other age, Medicaid but no Medicare	64,093,550
Other age, neither listed public program	186,913,271

Reconciliation finding: The original Step 50 age 60–64 classification used AGE24X, which is -1 for **157** positive-weight records with year-end age unavailable. The Step 63 dental age classification used the valid AGELAST field. For consistency, Step 110 uses AGELAST for its new age/insurance survey tables, and **exactly preserves the older AGE24X rule** solely when reproducing the Step 50 six-group bridge. The difference is a documented **age-variable definition difference**, not an unexplained numerical inconsistency. Medicare and Medicaid indicators measure ever covered in 2024, not proof of simultaneous dual enrollment.

6. Scope boundaries and next checkpoint This output measures source-compatible **historical exposure and reported access patterns**, including the covered but financially burdened; an uninsured count alone would miss much of that population. It still does not establish (a) condition-level unmet clinical need; (b) changes in patient uptake when prices fall; (c) annual eligibility and switching into a new plan; (d) service overlap and the 26-benefit-specific accounting; (e) care-provider supply or capacity; or (f) 2025–2054 policy costs. Self-reported unaffordability is not itself a guaranteed increase in claims.

Step 110 accepted: survey controls reconcile, historical six-group mappings match, missingness and cell suppression are explicit, and the full joint aggregate is reproducible. **Next: Step 111**, a bounded policy-marginal exposure and conditional uptake scaffold for all 26 benefit pathways under scenarios A–D, explicitly separating the initial surge from later stabilization, detecting overlapping pathways, and flagging which effects cannot yet be estimated. Do not add or revise 30-year cost totals merely by multiplying these survey counts.

Artifacts: Universal_Healthcare_Step110_Joint_2024_Exposure_Audit.json (complete aggregate tables and uncertainty) and step110_meps_joint_exposure_audit.py (reproducible aggregate-only calculation; source ZIP must be obtained from AHRQ).

N.111 Original research Step 111 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study, 2025-2054

Step 111 — Conditional benefit-specific exposure and uptake framework

Status: completed as a model-definition and historical-data-linkage step. Not yet a calibrated demand, savings, health-outcome or cost projection.

This checkpoint advances the established four-scenario study without changing the 26 benefits, 30 distinct event families, 120 scenario-year records or 3,600 scenario-year-event-family demand rows. The latest 2024 survey cohorts from Step 110 are included as historical reference points, not automatically promoted into the 2025-2054 forecast.

1. Scenario and timing contract

Scenario	Healthcare coverage design	Healthcare procedure prices
A	Existing coverage	Current prices
B	Universal coverage	Current prices
C	Existing coverage	Nationally regulated prices
D	Universal coverage	Nationally regulated prices

There are **30 years (2025-2054)** under each scenario. The existing plan labels **2025-2027** a possible initial catch-up period, **2028** an unresolved transition year and **2029** an illustrative full-design milestone. This is a testable timeline, not an enacted policy or a measured utilization ramp. **A timing gap is explicit:** a large 2025-2027 catch-up surge cannot be applied mechanically if the universal design only reaches full adoption in 2029. Partial eligibility, enrollment, outreach and effective coverage in each earlier year must first be specified. For A and C there is no universal-coverage reform by definition; for A and B nationally regulated pricing is off by definition. The other adoption and price-reform shares remain **null**, not zero.

2. Historical access exposure brought forward The audited 2024 MEPS universe is **339,797,630** weighted people. Among **334,618,276** with valid answers to all three questions, **33,738,310** distinctly reported inability to afford at least one medical, dental or prescribed-medication service. The measured union includes **17,814,455** in the any-private-medical group, **11,175,468** in the public-medical-only group and **4,748,388** medically uninsured all year. An additional **5,179,354** weighted persons had incomplete combined affordability responses, separately preserved.

Those 2024 cost-barrier responses do **not** equal diagnoses, guaranteed willingness to request appointments, actual benefit gaps, 2029 enrollment, or added completed services. The source-compatible Step 110 **21 age × medical-insurance cohorts**, associated affordability summaries

and small-cell suppressions are linked into the machine-readable Step 111 contract. Older adults with sparse 2024 full-year medically-uninsured respondent counts remain suppressed; an absent published estimate is not zero.

The private-dental indicator identifies a reported private benefit in interview periods, not whether public dental coverage is available or adequate. Medical-insurance type cannot be substituted for benefit-specific dental, vision, hearing, behavioral health or long-term-care coverage.

3. All 26 benefit lines retained These are descriptive labels for the exact numbered benefit definitions and primary/secondary event families already preserved in the Step 107 register.

Line	Clinical/service pathway	Canonical primary completed-event family
1	Preventive screening and early detection	Ambulatory encounter
2	Vaccinations	Administered dose
3	Primary care and chronic-condition follow-up	Ambulatory encounter
4	Pregnancy, maternity and delivery	Labor/delivery episode
5	Pediatric and developmental care	Ambulatory encounter
6	Emergency care and transport	Emergency-department encounter
7	Specialty consultations	Ambulatory encounter
8	Laboratory testing	Completed assay
9	Diagnostic imaging	Imaging examination
10	Hospitalization	Inpatient stay
11	Outpatient procedures and surgery	Outpatient procedure
12	Cancer therapy	Infusion session
13	Dialysis and advanced renal care	Dialysis session
14	Prescription medications	Retail Rx purchase
15	Dental care	Attended dental visit
16	Vision and eye care	Vision examination/fitting
17	Hearing and audiology	Audiology examination/fitting
18	Mental-health care	Behavioral therapy session
19	Substance-use treatment	SUD treatment encounter
20	Rehabilitation (PT/OT/SLP)	Rehabilitation session
21	Medical equipment and devices	Device fitting/delivery
22	Home health	Home-health visit
23	Long-term personal/direct care	Direct-care hour
24	Postacute skilled care	Skilled-care patient-day
25	Hospice and palliative care	Hospice/palliative patient-day
26	Navigation, interpretation and care coordination	Navigation/case contact

Each line retains its original clinical-eligibility condition, repeat-service rule, additional linked families and double-count gate. A preventive visit can produce one completed office encounter plus separately completed laboratory work, not a second office encounter simply because several benefit labels apply. One chronic illness can require many events across years, not one event automatically for every diagnosis. Retail prescription purchases include refills and cannot be counted as all new medication starts.

4. Exposure-to-care conversion — the required accounting chain For every scenario, year, relevant age/coverage/benefit subgroup, event family and regional staffed-capacity market:

1. **Population and actual benefit eligibility.** Project people by age, coverage and geography, then apply the service-specific benefit design and exclusions. Persons may qualify for multiple benefits; **do not add benefit-level unique persons.**
2. **Clinically indicated need.** Estimate age-, condition-, severity- and recurrence-specific required services. A reported inability to afford care is a historical signal, not proof of an indicated screening, procedure or diagnosis.
3. **Requests and initial surge.** Separately estimate previously unrequested indicated care released by an actual reduction in patient barriers, genuinely new incidence, indicated return visits and downstream appointments after earlier detection. Preserve nonrequesters as unmet need, **not scheduled queue.**
4. **Actual completed care.** Use unique event-level identifiers and regional staffed supply. A simplified cap is completed = min(valid requests + outstanding requested backlog, deliverable capacity) with cancellations, clinical changes and scheduling explicitly modeled. A national capacity total must not conceal local shortages.
5. **Backlog and follow-up over time.** closing requested backlog = opening requested backlog + valid new requests – completed – expired/cancelled/no-longer-indicated. Separate ongoing follow-up due to earlier diagnoses from finite catch-up care.
6. **Prices, costs and delayed outcomes.** Apply actual delivered events to scenario-specific allowed prices, administration and transition expenses, then test later complications averted, hospitalization reductions, productivity or other outcomes **only where supporting evidence and temporal lag exist.** Do not assume early diagnoses immediately produce savings.

Pricing interaction: Scenario C can lower reimbursement prices without expanding insurance; it does **not automatically lower patient out-of-pocket costs.** Scenario B expands eligibility without automatically lowering provider prices. Scenario D combines both mechanisms, but provider participation and capacity effects remain necessary inputs. The incremental effect of D cannot safely be obtained by adding the independently assumed B and C effects.

5. Measurement readiness and blockers The original 2024 event register has partial/broad baseline anchors for primary benefit lines **1, 3, 5, 7** (office visits), **6** (ED encounters), **10** (hospital stays), **14** (retail prescription purchases) and **15** (attended dental visits). That is **8 of 26** primary lines with an available broad 2024 event-family anchor, **not** eight validated benefit-specific treatment-demand models. The remaining **18** lines lack a matching exact full-national 2024 event-family volume anchor in the preserved register; some do have selected external research or overlapping setting-level evidence.

The three MEPS affordability questions provide medical-, dental- and prescription-domain signals. They do not separately measure all 26 benefit-specific financial barriers or ascertain which service will be taken up after reform.

The following numerical inputs remain **unestimated and explicit** in Step 111: annual population/coverage transition by group; service-specific clinical need; benefit inclusion and cost-sharing; patient response and referral completion; 2025–2028 partial rollout; the magnitude and duration of backlog release; regional staffing/capacity; actual negotiated/regulated unit costs; and lagged outcome changes. An unestimated value is **null, not zero.**

6. Reconciliation and acceptance

- **26** benefit lines: exact Step 107 primary/additional event-family links and eligibility/deduplication text preserved in the contract.
- **30** event families: consistent keys for completed-event units and one-count-only accounting.

- **4 × 30 = 120** unique scenario-year input slots created, with proper structurally-off policy levers and otherwise unestimated values.
- The established **3,600** scenario-year event-family ledger rows remain **unmodified**; no extra rows were mistaken for delivered treatment.
- Audited 2024 population, insurance and affordability controls carry forward unchanged from Step 110, with explicit survey small-cell protection.
- The prior **illustrative D–A +\$9.440 trillion over 30 years** remains **unvalidated**; Step 111 has not produced, altered or endorsed an aggregate financial result.

Step 111 accepted as a structural gate, not a numerical calibration. The machine-readable contract is `Universal_Healthcare_Step111_Conditional_Exposure_Uptake_Contract.json` ; its field-level requirements prevent missing source values from quietly becoming zeros or fabricated projections.

Next: Step 112 — Define the bounded first calibration targets and identify which existing evidence can support them: actual baseline unmet clinical need, service-specific patient out-of-pocket relief under each scenario, pre-2029 partial implementation, and demand conversion for the initial finite backlog. Start with a small set of defensible, distinct clinical pathways and leave the other 26-line inputs explicitly unknown until supported. Preserve the distinction between an early requests surge and the longer-horizon benefits of earlier detection.

Study provenance: Step 107 integrated demand baseline; Step 110 audited report; Step 110 aggregate survey tables.

N.112 Original research Step 112 (historical source; full path in Appendix M)
U.S. Universal Healthcare Study, 2025-2054

Step 112 — Finite initial demand surge: historical access proxies, phase-in, and throughput

Status: complete as a bounded, conditional first-wave sensitivity checkpoint, not a national demand or completion forecast. No change is made to the 26-benefit, 30-event-family, 120-scenario-year or 3,600-event-family ledger, and no 30-year cost result is recalibrated.

1. New calibration choice Steps 50 and 108 already tested **25% / 50% / 75% conversion** of all respondents reporting a medical, dental or Rx affordability problem. Step 112 does **not** repeat that work. Its new, narrower finite-initial-contact stress test starts with the same-source 2024 MEPS respondents who simultaneously:

1. Reported being unable to afford a particular type of needed care in the preceding 12-month recall; **and**
2. Had **no recorded corresponding 2024 use** of the available proxy (office visit for medical, dental visit for dental, retail Rx purchase for medicine).

These are **historical no-use-and-cost-barrier person/service flags**, not verified medically indicated events, 2025 new beneficiaries, all unmet clinical need, a provider waiting list, or a cap on eventual care. The recall window and calendar-year service-use window are imperfectly aligned. Someone can have medical care in a hospital despite no office visits; already-served patients can still lack other needed treatment. A person can appear in several service flags.

Service-area proxy	2024 people reporting unaffordable	
	service	Of them, no recorded same-type use
Medical care / office use	11,662,802	3,140,638
Dental care / dental use	25,064,349	17,163,074

Service-area proxy	2024 people reporting unaffordable service	Of them, no recorded same-type use
Prescription medicine / retail Rx purchase	8,880,192	1,353,362

All weighted counts are sourced from the already-audited AHRQ MEPS 2024 person analysis in Steps 50/108. Rounding in their with-use/no-use components differs by at most one person. **Do not sum the three no-use figures as distinct people.** The separate overall affordability-barrier union is 33,738,310 distinct people across the three categories among fully valid responders, as audited in Step 110.

2. Legacy five-year phase-in restored as a test, not an assertion The earlier Step 48 scenario model used **20%, 40%, 60%, 80%, 100%** cumulative policy implementation across **2025-2029**. Step 111 rightly refused to treat that schedule as observed enrollment or guaranteed access. Step 112 now reuses those exact older fractions only as an **illustrative sensitivity schedule**. Actual implementation, benefit eligibility, within-year exposure duration, provider acceptance, patient cost-sharing and demand are still unknown.

Calendar year	Cumulative illustrative implementation	Newly exposed fraction of one fixed source stock, not the cumulative fraction
2025	20%	20%
2026	40%	20%
2027	60%	20%
2028	80%	20%
2029	100%	20%

Critical no-duplicate rule: If the question is one-time catch-up requests from a finite starting stock, use **20% newly exposed in each year**, not $20\% + 40\% + 60\% + 80\% + 100\% = 300\%$ of the source stock. That is the central advance of Step 112. The fixed historical stock is for calculation only; 2025-2029 population, clinical need, insurance and personal circumstances will actually change.

With the old phase-in, **60%** of that stock has been newly exposed by the end of **2027**, and **40%** comes in **2028-2029**. It is therefore internally inconsistent to assume that the entire finite catch-up wave is released during 2025-2027 while also assuming this implementation ramp, unless a separate earlier-access mechanism is defined. Actual pending requests may persist beyond 2029 if service capacity is insufficient.

3. One-time first-request proxy stress grid For each service flag, use:

one-time new request proxy in year = 2024 no-same-type-use-and-barrier flags × fraction newly exposed in year × assumed request conversion.

The **25%, 50% and 75%** rates are **previously established arbitrary stress-test fractions**, not empirically credible bounds, national treatment probabilities or confirmed medical indications. The output assumes one request proxy unit for each converted person/service flag; a care pathway may actually require zero, one or many performed service units.

Historical service-domain flag	25% converted across 2025–29	50% converted across 2025–29	75% converted across 2025–29
Medical with no office use	0.785 M	1.570 M	2.355 M
Dental with no dental use	4.291 M	8.582 M	12.872 M
Rx with no retail purchase	0.338 M	0.677 M	1.015 M

These are **hypothetical one-time request proxies over five years**, not people treated, filled prescriptions, dental restorations, additional needed clinician visits, or forecasts. They must not be added to each other as unique people or to existing baseline event counts as completed care. Under the equal-tranche assumption, about **one-fifth of the respective five-year proxy volume** would be newly requested per year, before any within-year delay, repeat visits or capacity restriction.

4. Separate evidence-linked dental annual-use sensitivity We preserved the earlier Steps 63–65 dental causal-evidence stress response: **+3 and +6 percentage points** in annual probability of at least one dental visit in a relevant exposed low-income population. This is a **different outcome and different, overlapping population** from the finite no-use flag pool above. Its Step 64 2024 MEPS study-like denominator was **28,831,311 low-income adults age 19–64 below 138% FPL**. That denominator is **not** the set proven to gain a new dental benefit; assuming every person is exposed is a deliberately optimistic condition, not observed implementation.

For an illustrative active cohort with the old cumulative phase-in—and treating its exposure as if effective for the whole year—the net annual visitors would be:

Year	Illustrative active fraction	+3 pp annual dental visitors	+6 pp annual dental visitors
2025	20%	172,988	345,976
2026	40%	345,976	691,951
2027	60%	518,964	1,037,927
2028	80%	691,951	1,383,903
2029	100%	864,939	1,729,879

This table is an **annual active-exposure effect**, not a sum of one-time newly covered people. For instance, 2029’s visitor increment may include people who gained access in earlier years. Do **not** sum annual rows to claim unique five-year beneficiaries or add these visitor changes to the dental backlog-request table. It also does not tell us appointments per visitor or the number of staffed completed dental treatments.

As a separate external reality check, the previously examined Oregon Medicaid lottery estimated about **+21 pp** for any outpatient visit among a specific comparable low-income newly insured cohort and **+0.41 ED encounters per person over roughly 18 months**. Neither is a universal national demand multiplier, and the measures have different units and time windows. We do not apply them to the 2024 MEPS entire population.

5. Requests are still not completed care: capacity accounting The machine-readable test also includes deliberately normalized **50% and 100% of new-request volume** as hypothetical incremental staffed throughput. This tests accounting identity, **not** an estimated dentist, hospital, pharmacist or physician capacity. If one unit of new demand is requested but only half a unit can be completed within that year, the other half carries into the **requested** backlog. It is not automatically a canceled need and not counted as a completed billable service.

Example only: In the **50% conversion** dental no-use proxy case, each equal 20%-tranche year generates roughly **1.716 million hypothetical requests**. If additional dental delivery slots accommodate only half that new annual flow and none of the remaining pending requests, approximately **858,000 requests** carry past the first year and about **4.291 million** remain in the hypothetical five-year requested queue by end-2029. At 100% marginal throughput, that illustrative queue does not accumulate. **Neither capacity case is an observed U.S. workforce estimate.** Existing patients and actual regional staffing must be accounted for before using any real completion numbers.

6. Scenario mapping and limitations

Scenario	Coverage-derived finite first-wave stress	Other mechanism that remains unestimated
A: Existing coverage / current prices	Off by policy definition; baseline activity remains	Existing access trend, unmet care
B: Universal / current prices	May apply conditional exposure and request stress	Benefit-specific access, uptake, actual capacity
C: Existing coverage / regulated prices	No coverage-expansion wave	Cost-sharing pass-through, provider participation, possible care changes
D: Universal / regulated prices	May apply the same starting exposure test as B	Price/participation effects interact with access, not simply additive

Unestimated: the true 2025–2054 number of additional people receiving materially new benefits; clinical diagnoses/need; probability that barriers convert to clinically appropriate requests; provider acceptance, time-to-appointment and local resource capacity; treatment-course length; revised prices and out-of-pocket terms; and net long-run outcomes. The original 26 pathways remain open, but no guessed rates have been propagated into the other 27 event families beyond the three bounded proxies.

7. Audit and next checkpoint PASS: original survey controls and one-person rounding tolerance; fixed stock partition into nonrepeating five 20% tranches; existing 25/50/75% arbitrary conversion grid; 45 service × conversion × year request-proxy rows; separate age/poverty-defined dental +3/+6 pp annual visitor sensitivity; 50%/100% normalized queue arithmetic; A/B/C/D coverage-versus-price distinction; preservation of all missing actual values as null; no mutation of 120/3,600 ledgers.

What Step 112 does not claim: The totals are **not** validated national 2025–2029 demand, backlog, completed services, guaranteed economic savings or a U.S. rollout forecast. The old illustrative **D–A +\$9.440 trillion/30 years** is still unvalidated and untouched.

Step 112 accepted as the finite-stock/phase-in/throughput stress checkpoint.

Next Step 113: Determine the first defensible **regional staffed capacity denominator** for the selected initial medical, dental and pharmacy service families—existing baseline use, available workforce hours, appointments/dispensing capability and realistic expansion time—before allowing any of these request proxies to turn into national completed-service claims. Focus on capacity bottlenecks for the high-demand dental and primary-care pathways, with explicit distinction between screening, referrals and treatment.

Provenance: Step 108 source-aligned uptake study; Step 110 survey estimates; Step 111 framework. Supporting reproducible aggregate script: `step112_first_surgedemand_sensitivity.py`; output: `Universal_Healthcare_Step112_Initial_Surge_Sensitivity.json`.

N.113 Original research Step 113 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study, 2025-2054

Step 113 — Regional clinician workforce denominators and incremental throughput audit

Status: complete as a bounded regional workforce-location and legacy-capacity-assumption checkpoint. Actual staffed appointment/dispensing capacity is still **unestimated**. No prior 26-benefit definitions, four A-D scenarios, 30 canonical event families, 120 scenario-years, 3,600 demand cells or 30-year financial outputs are changed.

1. What Step 113 newly establishes There are **three distinct quantities**. The study must not call them interchangeable:

- 1. Already performed services:** 2024 MEPS nationally weighted office visits, dental visits and retail prescription purchases.
- 2. Where clinicians are recorded:** HRSA county provider counts and shortage-geography flags; BLS state pharmacist/technician employment. These show the spatial starting workforce, **not spare treatment slots**.
- 3. Additional safely staffed services:** provider clinical FTE hours, practice and pharmacy acceptance, available facilities/chairs, equipment, assistants, time per encounter, preexisting commitments and regional travel. These remain **unmeasured nationally**.

This checkpoint adds **3,235 official AHRF county-equivalent records** and **54 state/district/territory workforce records** to the analysis. For comparative provider-to-population distributions, **50 states/district jurisdictions** pass the defined data-comparability gate: the 50 states plus DC **except Connecticut**. Connecticut's mixed county vintages and all three territories are retained with visible flags, not silently dropped from source row counts or misreported as valid ratios.

2. Source years and exact personnel definitions

Quantity	Official source and reference year	What is actually counted
Primary-care physician supply	HRSA AHRF, underlying AMA 2023	Nonfederal primary-care physicians delivering patient care, excluding hospital residents and clinicians age 75+, not the entire NP/PA/primary-care team
Dental workforce	HRSA AHRF, underlying ADA 2023	Professionally active dentists (federal and nonfederal); private-practice subset separately retained; not dentist/hygienist/assistant clinical FTE or chair availability
Pharmacy workforce	BLS May 2025 OEWS	Employed pharmacists (SOC 29-1051) and employed pharmacy technicians (29-2052) across industries; not retail-only, clinical hours or dispensing volume per pharmacist
Population comparison	AHRF, Census county estimates 2024	Resident population used in descriptive workforce-per-100,000 rates; not the MEPS civilian noninstitutionalized denominator

Quantity	Official source and reference year	What is actually counted
Geographic primary/dental HPSA status	AHRF 2025 (02/25 source code)	Codes 1=whole county, 2=part county, 0=no whole/part county code; not a county-wide patient shortage count or current treatment-capacity rate

Original downloads: HRSA AHRF 2024–2025 county data; HRSA variable documentation; BLS May 2025 state employment file. The survey coverage of BLS OEWS consists of wage-and-salary jobs in nonfarm employers and excludes the self-employed; a headcount is not a full-time-equivalent count. BLS employment relative standard errors are preserved by state in the structured audit.

3. Workforce-location findings Among the **50 comparable states/district jurisdictions**, the unweighted jurisdiction median workforce density was:

2023/2025 workforce relative to 2024 population	Median per 100,000	Middle 50% of jurisdiction values (Q1–Q3)
Recorded primary-care patient-care physicians	77.09	67.61–82.99
Professionally active dentists	54.06	49.48–63.41
Employed pharmacists, all industries	95.54	86.37–107.70

These medians are **not national population-weighted clinician availability**, not matched patient catchments and not capacity to accept new universal-plan patients. Years and occupational universes differ.

Examples of the variation, shown solely to demonstrate the need to model locations separately:

State	Recorded 2023 primary-care physicians per 100k 2024 residents	Recorded 2023 active dentists per 100k	Employed 2025 pharmacists per 100k
North Carolina	68.91	56.38	103.48
Texas	59.32	52.92	78.94
California	83.16	77.21	86.30

The BLS source’s **54 area estimates**, including three territories, add to **324,300 employed pharmacists** and **477,680 pharmacy technicians**. Those are sums of state/territory employment estimates, not a newly established national count of retail pharmacists, retail pharmacy sites or prescription-handling staff-hours.

In **3,135 source-comparable county equivalents** (excluding incompatible Connecticut rows, the obsolete empty Alaska row and the territories), **254** report **zero physicians in the narrowly defined 2023 AHRF primary-care category** and **326** report **zero professionally active dentists in the relevant 2023 ADA category**; **158** have both recorded categories at zero. These zeros are **not proof of zero clinical service**: excluded clinicians, advanced practice professionals, missing profession coverage, cross-county travel and health systems can supply care. But it would be demonstrably unsafe to assume that additional national capacity is evenly available in every county.

The 2025 AHRF HPSA geographic county-code frequencies in those same 3,135 comparable records are:

Designation code	Primary-care county records	Dental county records
0: no whole/part geographic county code	241	498
1: whole county code	832	457
2: part county code	2,062	2,180

These are county-record counts, not people living in shortage areas. A part-county designation must not be applied to the entire county’s residents, and the geographic code omits separate population- and facility-designation mechanisms. HRSA’s live dashboard has newer 2026 designations, which are not silently mixed into the 2025 AHRF county file.

4. Critical geographic source conflict detected and contained The AHRF county release has **17 Connecticut geographic records**: eight former counties and nine newer planning-region county equivalents. In this file, some 2023 primary-care counts appear with the old eight county identifiers, while several dental and 2024 population values appear with the nine new planning-region identifiers. **A naïve county join would produce misleading rate calculations or omit clinicians.** The U.S. Census Bureau documents Connecticut’s adoption of nine new county-equivalent planning regions in place of eight former counties. We preserved the original rows and withheld CT county and state population-normalized workforce rates pending a legitimate geographic crosswalk.

One obsolete Valdez-Cordova, Alaska, county-equivalent record is all missing and is excluded from complete-geography coverage tests; it remains present in the source. Virgin Islands populations are unavailable in this AHRF extraction. Guam and Puerto Rico show unresolved source-coverage differences in AMA/ADA counts, including dentist-category zeros that cannot safely be construed as no dentists; their provider densities are also withheld. None of these missing or incompatible values was converted into a healthy zero.

5. Audit of the earlier illustrative net-new slot ceilings Our prior Step 88 service/shift stress model used these **assumed**, not workforce-verified, annual additional slot ceilings:

Service family	2025 assumed net-new ceiling	2027 assumed ceiling	2029+ assumed ceiling
Office visits	800,000	2,400,000	4,000,000
Dental visits	1,000,000	3,000,000	5,000,000
Retail Rx purchases	400,000	1,200,000	2,000,000

We normalize these old slot assumptions to the source-audited 2024 MEPS national event volumes of **2,410,092,512 office visits**, **361,292,050 dental visits**, and **3,029,450,238 retail Rx purchases (including refills)**. For 2025, the old ceilings equal only **0.0332%**, **0.2768%** and **0.0132%** of their respective historical service volumes. Even apparently small nationwide percentages do not imply spare staffed appointments in particular locations, disciplines or facilities. This arithmetic is **not** a validated provider-throughput estimate.

The Step 112 finite-backlog sensitivity gives a separate hypothetical 2025 comparison. Under its inherited 20% first tranche, 50% arbitrary conversion, and one new request unit per affected no-use/barrier flag:

2025 service	Step 112 hypothetical new requests	Old Step 88 assumed additional slots	Difference (slots – requests)
Office	314,064	800,000	+485,936
Dental	1,716,307	1,000,000	–716,307
Retail Rx	135,336	400,000	+264,664

Conditional finding: Under this pair of unvalidated assumptions, first-year dental requests exceed the old dental slot hypothesis by roughly **716,000**. The positive differences in office and Rx columns do **not** establish unused national provider capacity. Baseline patients, referrals, specialty time, staffing, location, facility constraints and actual medical appropriateness are omitted. Nor can these dental request proxies be added to the separate Steps 64/112 annual dental visitor-probability responses; the groups overlap and the units differ. We preserve the 2026 and 2028 capacity hypotheses as **unknown**, rather than interpolating an unverified service-supply curve.

6. Requirements before counting actual completed care For each regional catchment and event family, the needed operational service-capacity calculation is:

incremental safely staffed slots = service-capable clinical staff FTE hours × service-specific usable units/hour × actual acceptance/access fraction – already committed workload – protected urgent/continuity reserve, additionally bounded by chairs, assistants, labs, pharmacy workflow and other linked inputs.

- **Primary care:** include nurse practitioners, physician assistants, nurses, examination rooms, scheduling and encounter complexity in addition to the narrower AHRF physician count. A screening visit may create specialist, laboratory or imaging requests later.
- **Dental:** include dentist and hygienist FTE, dental assistants, chair-time, necessary multi-visit restorative treatment and willingness to accept the new plan. One attended dental visit is not an entire treatment episode.
- **Retail pharmacy:** identify retail-only staff-hours and pharmacy locations, prescriptions versus refills, pharmacist verification and dispensing-workflow capacity. BLS pharmacist employment in all industries is not a count of retail fills available to new beneficiaries.
- **All three:** protect current patient services and emergency readiness, match supply to county/region/catchment rather than spreading capacity equally by population, and lag workforce/clinic expansion appropriately.

Until those inputs exist, newly_requested, truly_locally_completable, completed and remaining_queued remain separate; **national additional completed visits and 2025-2054 cost effects remain null**, not zero.

7. Checkpoint and next task Verified: HRSA CSV partitions each contain 3,235 unique FIPS records; their one-to-one joins reconcile; 54 HRSA state/territory codes match 54 BLS 2025 OEWS area codes; sampled profession definitions trace to HRSA technical documentation; BLS pharmacists and technicians each have 54 numeric regional estimates; no person/provider identifiers published; Connecticut and territory comparability exceptions held; the old illustrative 2025 slot shares and Step 112 one-time request figures recalculate. The structured JSON holds all 3,235 public county rows, state summaries, source hashes, source variables, HPSA flags and hypothesis comparisons for reuse.

Step 113 accepted as a provider-location baseline and conditional national throughput audit; actual appointment/dispensing-hour calibration is not complete. All four scenarios, 26 benefits, 30 event families and long-run outcome pathways remain intact. The legacy Step 48 **D–A +\$9.440 trillion over 30 years** remains an unvalidated illustrative output and was neither recalculated nor endorsed.

Next: Step 114 — bounded staffed-hour conversion pilots. Establish defensible clinical hours, procedure durations, existing utilization and acceptance fractions for primary-care, dental and retail-pharmacy sample markets, then test how quickly regional slot bottlenecks could expand. Keep regional scaling to the national model blocked until those calculations pass unit and source validation.

Official reference links

- HRSA Area Health Resources Files and methods
- HRSA shortage-area dashboard
- BLS May 2025 occupational employment state tables
- BLS OEWS survey coverage
- Census explanation of Connecticut county-equivalent change
- Step 112 first-surge sensitivity report

Reproducibility artifacts: Universal_Healthcare_Step113_Regional_Workforce_Capacity_Audit.json and step113_region_workforce_capacity_audit.py. Only derived publicly aggregated workforce records are saved, not the bulky underlying agency ZIP files.

N.114 Original research Step 114 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study, 2025-2054

Step 114 — Convert clinician headcounts into bounded staffed-hour pilots

Status: complete as a reproducible three-setting, one-team/one-shift stress test. National incremental completed care, geographic accessibility and 30-year fiscal results remain unestimated. Existing 26 benefit lines, 30 event families, four A-D scenarios, 120 scenario-years and 3,600 demand slots are unchanged.

1. What we actually learned from published operations data

- **Dental:** The ADA Health Policy Institute's 2025 workforce report shows that in **2024**, dentists averaged **30.5 hours/week treating patients** and **5.5 hours/week in-office not treating patients**, with a rounded **36.1 hours/week total**. The treatment hours are already used, not extra openings to reallocate. Rounding means the three reported figures do not sum exactly. ADA HPI, figure on page 44 of PDF.
- **Physicians:** A 2024 AMA organizational survey reported **27.2 direct-patient-care hours/week** for participating physicians across specialties, out of **57.8 total weekly work hours**. This is neither a primary-care-only average nor a spare-capacity estimate. AMA original publication.
- **Primary-care visit time:** CDC's **2019** office-visit survey reported **21.3 mean minutes physically spent with the physician** for primary-care visits, with **32% of physician-time records missing and imputed**. This excludes full examination-room occupation, documentation and subsequent referrals. CDC NAMCS Table 27, page 40.
- **Retail prescriptions:** NCPA reports **67,601 prescriptions dispensed per independent store in 2024** and **65,795 in 2025**. These are observed volumes at a specific pharmacy segment, not a safe per-pharmacist maximum or an estimate of nationwide spare retail capacity. 2025 NCPA Digest; 2026 Digest.

Modeling distinction: Hours treating current patients cannot also be counted as empty slots for new patients. Every pilot below assumes the specified hours, assistants, rooms/chairs and facilities are **truly added** above already committed services. Forty-six service weeks/year is our transparent sensitivity assumption, **not observed calendar utilization**.

2. First one-team/one-shift conversion, with all extra assumptions visible For each resource, calculate floor(staffed hours/week × 46 weeks × 60 / required minutes per visit or fill). The new team's theoretical limit is the **lowest resource-specific limit**. This does not establish extra national appointments, because regional participation and actual new staff are unknown.

Fully incremental sample	Components of illustrative workflow	Single-team annual ceiling	First binding resource
Primary care	Physician 27.2 direct h/week, 21.3 min face-to-face (both sourced but from different survey populations/years); medical assistant 32 h/week × 30 min, room 36 h/week × 45 min (both hypothetical)	2,208 visits	Examination room
Dental midpoint	Dentist 30.5 patient-treatment h/week (ADA), 45 min dentist-time/visit; assistant 32 h/week × 45 min; chair 32 h/week × 60 min (durations and nondentist hours hypothetical)	1,472 visits	Equipped chair
New retail pharmacy shift	Pharmacist 10 h/week × 3 min/fill; technician 10 h/week × 4 min; dispensing station 10 h/week × 3 min (all assumptions)	6,900 fills	Technician handling

The pharmacy pilot concerns one newly staffed shift and assumes enough additional supply/dispensing space; NCPA's observed per-store prescriptions cannot be subtracted from that new-shift maximum to find spare capacity. Similarly, the primary-care physician and dentist averages describe existing clinical time, not direct guarantees of identical productivity for new practices.

3. The inherited dental backlog-proxy bottleneck, now in staffed teams Step 112's midpoint request proxy of **1,716,307** and Step 88's **unvalidated** 2025 dental extra-slot ceiling of **1,000,000** imply an illustrative **716,307 dental request-unit gap**. Those are neither clinically verified patients awaiting visits nor real staffed slots. The following calculations assume **each proxy request converts to exactly one (or two) completed dental visit(s)** and all added team capacity matches where requests occur; neither premise is demonstrated.

The sourced dentist hours and hypothetical assistant hours/minutes stay fixed while chair hours and occupied minutes change:

Dental chair case	Hypothetical staffed chair hours and chair duration	Annual visit equivalents per complete team	Complete new teams for 1 visit/request gap	Teams for 2 visits/request gap
limited chair	24 h/week; 75 min/visit	883	812	1,623
midpoint chair	32 h/week; 60 min/visit	1,472	487	974
expanded chair	40 h/week; 45 min/visit	1,870	384	767

At the midpoint, **487 new, appropriately located and fully supported team-equivalents** would have enough theoretical annual visit capacity to address the isolated gap if available all year. This is a conversion of two assumptions, **not a dental hiring target**, and dentist-only headcounts cannot create an equipped team.

4. Timing matters even if the teams can eventually be added Suppose, strictly for timing sensitivity, **500** complete midpoint dental teams are funded on January 1, 2025, and their capacity would be wholly **additional to** Step 88's old assumed million annual dental slots. With zero, six or eighteen months to become operational, their first-calendar-year contribution changes:

Hypothetical time to operation from Jan 2025	Extra 2025 visit equivalents above old assumed ceiling	Remaining isolated request-unit gap at 1 visit/request
0	736,000	0
6	368,000	348,307
18	0	716,307

These assume uniform capacity over operating months, no geographic misallocation, no existing caseload, no quality loss, no payer refusal and no treatment-course complexity. Actual additions could be smaller or even zero. The 18-month stress case's first-year slots are zero **because the added teams open after 2025**, not because the visits are unnecessary.

5. What this does and does not change Validated in this checkpoint: source numbers and what they measure; correct conversion from hours and durations to visit/fill equivalents; bottleneck minimum across necessary personnel/space; separate finite request proxies versus visits; 2025 deployment-time arithmetic; and explicit zero counted additional slots when staff, chairs and shifts are not actually added.

Still absent: actual locally available marginal clinician/assistant/chair/room hours, dentist procedure mix, actual pharmacy medication reviews and clinical work, existing commitments, patient eligibility, contracting/acceptance, travel, staffing recruitment and expansion lead times, and the number of appointments per episode. NCPA data describe dispensed retail prescriptions, not physician prescribing or clinically needed refills.

Therefore `actual_incremental_staffed_hours_by_region`, `actual_2025_newly_completed_visits`, `actual_2025_newly_dispensed_retail_prescriptions`, and `national_price_or_savings_impact` stay **null**, not zero. The old Step 48 30-year **D–A +\$9.440 trillion** result remains **unvalidated** and untouched.

Next Step 115 (bounded): Map **one** matched local dental pilot to real staffing, chair capacity, plan acceptance and appointment backlog (and preserve national extrapolation as unavailable if

an auditable local denominator cannot be found). Do not rerun all 30 service-family research or infer national spare appointments from workforce counts.

Reproducibility: `step114_staffed_hour_conversion_pilot.py` reads the existing Step 113 JSON and writes `Universal_Healthcare_Step114_Staffed_Hour_Pilot_Audit.json`. The audit records every sourced and assumed denominator and checks the inherited dental 2025 stress totals.

N.115 Original research Step 115 (historical source; full path in Appendix M)

U.S. Universal Healthcare Study, 2025–2054

Step 115 — One matched local dental capacity pilot: Mecklenburg County, NC

Status: local evidence and resource-bottleneck mapping complete. Actual incremental appointments and completed care remain unknown. No national capacity or 30-year financial projection was recalculated. The established four A–D scenarios, 26 benefit lines, 30 event families, 120 scenario-years and 3,600 demand cells are untouched.

1. Why this county and this service unit We used Mecklenburg County, North Carolina (Charlotte), an actual county in the Step 113 HRSA workforce extract, and a **single real county-operated pediatric mobile dental unit**. This narrows the exercise to a matched provider and facility instead of applying state or nationwide averages as if every dentist worked in the same type of clinic.

Observed local footprint (county-published):

Element	Matched evidence	Meaning for a capacity model
Dental site	MeckDental mobile dental unit	One identifiable service-delivery unit; not the whole county
Treatment rooms	Three equipped operatories/chairs , X-ray device	Physical equipment count, not three dentists or three independently staffed appointments
Clinicians	County states a full-time dentist and a dental hygienist staff the unit	Clinician types and full-time dentist status known; actual mobile patient-contact hours and hygienist FTE/hours unknown
Clinical service mix	Pediatric screenings/exams, cleanings, sealants; follow-up referred to county dental clinic for more comprehensive care	Screening and subsequent treatment must be modeled as separate linked events
Access channel	County reports a partnership with 15 Charlotte-Mecklenburg schools , and childcare/school/community outreach	Not open, unrestricted adult dental access and not evidence of 15 identical clinics
Target group/payment	Pediatric patients, low-cost county services; county dental clinic sliding fee; proof of local residence/income required	Plan-specific acceptance and new-patient appointment access not verified ; cannot call all residents eligible

Source: Mecklenburg Public Health Mobile Units; MeckDental eligibility and fees; Mecklenburg County's original launch announcement.

Two dated launch statements refer to distinct stages, not interchangeable first-service dates: The county announced its preschool-screening mobile launch **November 12, 2024**; its service page identifies **February 2025** as the school-partnership rollout. Do not treat the second date as proof that nothing operated in 2024 or use either date to infer days open in 2025.

Source-age discrepancy retained: The mobile unit’s page says pediatric ages **1-17**, while the wider MeckDental clinic eligibility page states **0-17**. Treat clinic and mobile eligibility as separate until the county clarifies; do not silently choose one rule.

2. Matched county denominator from Step 113 HRSA Area Health Resources Files 2024–2025, county FIPS 37119:

County input	Observed value	Underlying year
Mecklenburg estimated population	1,206,285	2024
Professionally active dentists	919	2023
Dentists recorded in private practice	880	2023
Professionally active dentists per 100,000 residents	76.18	2023 workforce / 2024 population
NC statewide comparable dentist density	56.38 per 100,000	2023 workforce / 2024 population
County dental-geographic HPSA code	2: part-county code	2025 extract

The county’s higher recorded density than the NC average **does not imply available appointments**: active-profession counts are not schedules, FTEs, hygienists, assistants, reimbursement participation or open chair time. County code 2 does not identify which residents live in the partial shortage geography. Also, 2023 workforce predates the mobile unit’s 2024 launch, so it cannot validate whether this program added a dentist rather than reassigned one.

Source: preserved Step 113 HRSA AHRF county source and audit.

3. How Step 114 converts this specific physical unit into a conditional bottleneck This calculation is deliberately **not** observed mobile-unit throughput. It tests a counterfactual fully staffed dentist-led workflow while isolating what remains unknown:

- If the dentist provided **30.5 patient-treatment hours/week** as in the national ADA 2024 average, for **46 service weeks/year** (our assumption), and each dentist-led dental visit required **45 dentist-touch minutes** (our assumption), the arithmetic is $\text{floor}(30.5 \times 46 \times 60 / 45) = 1,870$ dentist-led visit equivalents/year.
- If **all three chairs** were separately staffed for **32 hours/week, 46 weeks/year, at 60 chair-occupation minutes/visit** (all three assumptions), their joint physical ceiling would be $\text{floor}(3 \times 32 \times 46 \times 60 / 60) = 4,416$ chair-use equivalents/year.
- In that **hypothetical dentist-led visit category**, a single dentist’s time would bind well before the assumed three-chair physical total: $\min(1,870, 4,416) = 1,870$ **gross visit equivalents**. The true limit could be far lower because hours on the road, school calendars, assistants, case mix, referrals and existing patients are unmeasured.
- The hygienist is a **separate treatment resource**, not an extra dentist; we do **not** add an invented number of hygiene visits to the 1,870 dentist-led equivalents. Likewise, a screening that triggers a county-clinic referral is **not** a completed restorative episode.

ADA reference for 30.5 actual weekly dentist patient-treatment hours: 2025 U.S. Dentist Workforce Report, 2024 work-time series. Actual hours used by this county mobile program, annual

clinic throughput, arrival/no-show patterns, assistant time and accepted appointments are **not established**.

This confirms the core operational constraint: **three chairs do not imply three simultaneously available dentist-led clinical sessions**. A nationally scaled equation based on chair counts or professional licenses alone would misstate service availability.

4. Enrollment, new-patient and backlog verification gate North Carolina Medicaid itself warns that appearing in its dental provider finder **does not confirm that the dentist or facility is currently accepting Medicaid beneficiaries**; callers must verify. The county's local pages describe its low-cost/sliding-fee pediatric pathway but do **not** independently establish acceptance of a hypothetical new universal plan, the mobile unit's payer mix, appointment inventory, or county waiting list. These are separate unresolved variables. NC Medicaid provider guidance.

One completed screening can identify new restorative needs at a different physical clinic, generating downstream demand. To count an avoided future complication under our long-term health-care model, we must distinguish screened, clinically referred, referral accepted, definitive treatment completed, and outcome; referral alone is not early-treatment success.

Publication status after bounded official-source research:

Needed local operational quantity	Verified value
Mobile dentist and hygienist weekly appointment hours	Unknown
Dental assistants and individually staffed chair hours	Unknown
2025 mobile dental visits, unique children, repeat visits	Unknown
2025 unfilled appointment slots and waiting queue	Unknown
Medicaid/current plan and hypothetical universal-plan acceptance	Unknown
Follow-up restorative referrals completed at county dental clinic	Unknown
Clinician time transferred from existing clinic versus new marginal staffing	Unknown

We did not find source-verified program-specific 2025 visits, appointment slots, queue length or payer acceptance in the county's public program pages and bounded official-source search. This **does not mean the values are zero or nonexistent**; it means the required audit-grade local denominators have not been obtained. No clinic was contacted or appointments booked.

5. Decision and next bounded step Step 115 passes as a real-world facility/staffing/eligibility validation and an explicit capacity blocker audit, not as a completed local throughput estimate. The one-unit staff/equipment/resource definitions now reconcile with Step 114's formulas, and the two launch milestones and two pediatric age definitions are preserved without conflation.

There is **no defensible local or national 2025 incremental visit count** to add to scenario B or D, nor evidence that the old **716,307-request** national hypothetical dental gap applies to Mecklenburg. All 2025-2054 national marginal completion, outcomes and price effects stay **null**, not zero. The old Step 48 **D-A +\$9.440 trillion** financial illustration remains unvalidated.

Step 116 (bounded): Define the exact, minimally sufficient local capacity audit intake: number of dentist/hygienist/assistant staffed sessions, actual completed visits by service, dedicated clinic days versus travel, open or refused new-patient slots, referral completions and payer participation. Use that to calculate **one** incremental completed-care lower/upper bound if source-confirmed

data become available. If not, retain the missing-data gate rather than repeatedly broadening the literature search.

Structured companion: Universal_Healthcare_Step115_Mecklenburg_Dental_Pilot_Audit.json .

N.116 Original research Step 116 (historical source; full path in Appendix M)
U.S. Universal Healthcare Study, 2025-2054

Step 116 — Exact intake needed to validate one local dental program’s additional appointments

Status: operational intake specification complete. Actual Mecklenburg incremental capacity is not yet measurable from the evidence obtained. This step neither contacts the county nor alters national demand, treatment or savings projections.

1. The matched program and correct comparison window **Site:** Mecklenburg Public Health’s MeckDental mobile unit, not all 919 dentists recorded in the county’s 2023 workforce data. The county reports **three equipped operatories, one full-time dentist, one dental hygienist,** and 15 participating schools. Preschool mobile screening began **November 2024**; the school roll-out was **February 2025**. The unit provides pediatric screening/prevention, with more extensive care referred to the county clinic. County launch announcement · County mobile program.

Time unit: Site-month, **November 2024 through December 2025**, with the parent fixed-clinic’s January–October 2024 schedule/visit baseline where feasible. The two launch milestones are separate. Do not label all 2025 appointments “new” simply because the school partnership started that February.

2. Six necessary, source-confirmed data bundles No names, dates of birth, member IDs, medical records or other patient-level identifiers are required. Monthly **aggregates** are sufficient for this first pilot.

Intake bundle	Exact fields needed, same site and reporting month	Why required
A. Actual staff time	Dentist treatment hours; hygienist treatment hours; dental assistant/sterilization-support hours; whether each is newly funded, overtime, or transferred from the fixed clinic	Prevents treating one dentist, one hygienist, or nominal FTE as newly available time without proving it
B. Staffed equipment	Days open to patients; treatment-chair staffed hours; time spent driving, setting up and sterilizing; chair time by visit type	Separates the three physical chairs from appointments that can actually be delivered
C. Encounter ledger	Appointment slots offered, attended/completed visits by dentist-led vs hygienist-led service type, cancellations/no-shows, new-patient versus returning visits	Allows an observed completion numerator; an exam, cleaning and completed restoration are different events

Intake bundle	Exact fields needed, same site and reporting month	Why required
D. Demand and acceptance	Requests received, requests accepted/declined/queued, end-of-month waiting list; eligibility and payer rules that applied that month; earliest offered appointment	Distinguishes a covered person's request from an accessible, accepted appointment; the county's low-cost child program does not verify hypothetical universal-plan participation
E. Follow-up treatment	Screenings triggering referral; referrals accepted; restorative visits completed at the county clinic; elapsed time between referral and treatment	Early detection cannot be credited as a completed cure; prevents counting referral and treatment as one event or two unique patients
F. Existing-clinic displacement	Fixed-clinic dentist/hygienist hours and comparable visit totals before and after mobile deployment; positions reassigned; fixed-clinic appointments canceled/reduced because of mobile deployment	Essential to distinguish new mobile-site output from net additional county-system capacity

Source standard: County scheduling/timekeeping, chair-session, encounter and referral-aggregate extracts with collection period, service definition and responsible source. An unverified phone claim or statewide dentist estimate does not satisfy a clinic-month denominator. NC Medicaid explicitly warns that a provider's appearance in its directory does not establish that it is accepting new beneficiaries. NC Medicaid.

3. Computation contract (only when bundles pass) For **each month and each service family**, keep four different outputs:

1. requested: eligible service requests that actually reached the program; retain rejections and queued requests separately.
2. offered: bookable service slots with appropriately available clinicians, assistants, equipment and payer eligibility; do not count idle/unattended physical chairs as slots.
3. completed: attended, documented service visits, de-duplicated from multiple claims or encounter lines for the same service encounter. This is not unique people; track unique children separately when reliable.
4. net_added: **county-system** additional completed visits after accounting for staff diverted and services displaced from existing programs, for the **same comparable services and period**. A pre/post difference alone does not establish a policy-causal effect.

Resource stress equation for each service family: $\text{gross_possible_visits} \leq \min(\text{verified dentist-or-hygienist contact minutes} / \text{matching minutes per visit}, \text{verified necessary assistant minutes} / \text{required assistant minutes per visit}, \text{verified staffed chair minutes} / \text{actual chair minutes per visit})$; any missing required coefficient makes the bound **unknown**, not zero. A service not needing an assistant does not receive a fictional assistant requirement. Hygienist-led visits must not be counted as dentist-led treatments.

Independent cross-checks before totals can enter the model:

- Offered appointment counts reconcile with completed, cancellations/no-shows and legitimately rescheduled/walk-in cases (do not double-discount attendance if hours are already recorded as patient-treatment time).
- Dentist, hygienist, chair and assistant staffed hours reconcile to the same site/month, excluding travel and work at the fixed clinic.

- Referrals and downstream treatments stay separate and are linked by **aggregate cohort** and reporting window; an observed county-clinic treatment must not be counted as an additional mobile visit.
- Any claimed net new capacity includes evidence that the labor, hours or appointments were actually added rather than moved; if displaced care is unbounded, county-wide net capacity is **not certified**.
- Accepted-payer and patient-age rules refer to the relevant service month. The county's mobile and general MeckDental websites differ on lower pediatric age boundary (1 versus 0); that remains unresolved.
- If months, visit categories, service populations or reporting systems differ, comparisons are labeled **not comparable** and not interpolated.

4. What can be calculated now — and what cannot

Value	Step 116 determination
Physical operatories and published staff roles	Confirmed: three chairs, a full-time dentist, one hygienist
2023 county dentist denominator	Confirmed descriptive: 919 professionally active; not dentist-hours or current accepting providers
Step 115 illustrative dentist-only exercise	floor(30.5 hours/week × 46 weeks × 60 / 45 min) = 1,870 dentist-led visit equivalents, not local output
Observed mobile attended appointments in 2025	Not verified
Marginal staffed hours after existing-clinic displacement	Not verified
Local 2025 unfilled accepted appointment capacity	Not verified
Effectively completed downstream dental treatment	Not verified
Policy-induced incremental appointments, national savings and mortality effect	Not estimable from this site evidence

The old Step 112/113 **716,307-request** national dental gap remains **an assumed stress-test difference**, not a waiting list, and cannot be assigned to Mecklenburg. All actual national 2025–2054 incremental completion and long-term financial fields stay null; the Step 48 30-year **D–A +\$9.440 trillion** remains unvalidated.

5. The handoff is ready The accompanying machine-readable intake contract explicitly marks each missing field, the required evidence source, unit and acceptance test. **No external contact has been made.**

Step 116 passed as a narrowly scoped collection/calculation contract for one real program. **Next Step 117:** conduct one bounded check for a published MeckDental annual output, scheduling or budget-performance table that fills these fields. If public sources do not supply it, stop and prepare a precise aggregate data-request draft for review, without sending it.

Preserved study structure: A existing coverage/current prices; B universal/current prices; C existing coverage/regulated prices; D universal/regulated prices; 26 benefits, 30 event families, 120 scenario-years and 3,600 event-demand positions. No national ledger mutation.

N.117 Original research Step 117 (historical source; full path in Appendix M) U.S. Universal Healthcare Study, 2025–2054

Step 117 — MeckDental public operational-records check, then narrowly scoped request draft

Status: bounded search and source attribution complete. Mobile-unit funding and program launch are verified; publicly documented actual 2025 mobile visits, appointment capacity, and queue remain unavailable from the checked official material. An aggregate data-request draft was prepared but **not sent**.

1. Newly verified funding evidence In its **June 4, 2024 FY2025 adopted-budget announcement**, Mecklenburg County lists:

- **\$266,000** for a dental mobile unit with dentist and dental hygienist support, under new funding for health access.
- A separate **\$100,000** for the Save a Smile program helping uninsured pediatric patients.

Source: Mecklenburg County FY2025 adopted-budget announcement.

Interpretation: The \$266,000 is an **adopted budget allocation**, not independently verified actual spending, all-in annual operating cost, two newly hired clinician FTEs, funded treatment-hours, accepted insurance participation, appointments delivered, or measurable cost per completed visit. The \$100,000 line is a distinct pediatric program and must not be merged into the mobile unit’s allocation.

2. Other checked county records and their exact limits

Source	Confirms	Does not establish
November 12, 2024 mobile launch announcement	Three equipped operatories and an X-ray device; planned full-time dentist plus hygienist; preschool mobile screenings launched	Their 2025 service hours, whether existing staff were reassigned, patient visits or capacity
Current county mobile program page	School program expanded February 2025 with 15 schools ; pediatric exams, cleanings and sealants; referrals for comprehensive treatment	Number of children or visits actually completed in 2025, cancellations, waitlist or treatment-completion outcomes
County June 2024 pediatric program employee recognition	The broader pediatric dental program had reportedly provided services to over 10,000 residents by publication	A 2025 mobile-unit patient count: the mobile unit’s public rollout happened after this article, and the article does not define a mobile-only time window
June 2026 fixed dental-clinic lease item	Separate county pediatric clinic continues to operate at leased premises; downstream care has a distinct facility	Free staff or chairs at that clinic, completed mobile referrals, or its additional visit capacity
MeckDental program information	Pediatric eligibility/residency and proof-of-income requirements; county fee-setting	Current NC Medicaid or hypothetical universal-plan acceptance, appointment inventory, mobile-specific service volumes

Critical cross-county exclusion: A Cabarrus Health Alliance performance document provides numbers for Cabarrus fixed and mobile dental visits, including a 2024 mobile count. These figures are **not Mecklenburg’s program** and were intentionally excluded. Likewise, dental visit counts from Guilford County cannot be transferred to Mecklenburg. County program identity is not interchangeable merely because the service types are similar.

3. Result against the Step 116 six-bundle intake

Required bundle	Step 117 evidence status
A. Clinician/assistant actual clinical hours and reallocation	Missing: roles and budget allocation do not give hours or displacement
B. Staffed chair minutes and mobile operating days	Missing: three installed chairs do not establish staffed calendars
C. Completed 2025 mobile visits by service and offered/canceled slots	Missing: no matched mobile-only annual tally located
D. New requests, plan acceptance, next available appointments, queue	Missing: clinic eligibility and fee descriptions are not accepted-patient availability
E. Referral acceptance and follow-up definitive-care completion	Missing: referral pathway confirmed, completed counts not located
F. Fixed-clinic activity displaced by mobile staffing	Missing: separate facility exists; baseline/displaced services not quantified

Result: None of the six collection bundles passes its operational-quantity verification gate yet. There is **one new budget provenance fact**, not six new measured denominators. Public search not locating a figure is not proof it does not exist in county records.

4. Unsent request and next decision Prepared Universal_Healthcare_Step117_Unsent_MeckDental_Data_Request.md for review. It asks only for **existing aggregate records** from November 2024 to December 2025, prioritized to avoid demanding a new, costly analysis or private patient data. There is no guessed destination email address; no communication was transmitted.

Next Step 118: Decide whether to submit the narrowly scoped county aggregate-data request through an official contact/records channel **with user authorization**. Pending data, preserve the local 2025 completed-visit, incremental staffed-slot, and downstream-treatment totals as **null**, not zero. If requesting records is not desired, close this county pilot as data-limited and resume the next item in the established national modeling plan; do not restart broad dental research.

Unchanged study framework: scenarios A-D; 26 benefit lines; 30 event families; 120 scenario-years; 3,600 event-demand positions. No national 2025–2054 outcomes or costs were recalculated. The inherited Step 48 D–A **+\$9.440 trillion/30-year** figure remains unvalidated.

N.118 Original research Step 118 (historical source; full path in Appendix M)

Step 118 — National Repricing Denominator Audit

Universal Healthcare Study (2025–2054)

Status: Completed mathematical stress test; service/payer eligibility is **not yet measured**.

Basis: Original Step 48 national four-path model, reproduced in the October 2026 provisional A/B/C/D workbook. All forward-looking values are hypothetical, not forecasts.

Executive finding

The model's quoted 15.82% break-even unit-price reduction is **conditional on repricing 45% of all NHE** and 50% of newly delivered incremental care. It is not a demonstrated achievable national fee reduction.

Observed 2024 U.S. national health expenditure (NHE): **\$5,278.6 billion**. The model's 45% assumed eligible-existing-spending share equals **\$2,375.4 billion in 2024 dollars**. For comparison, **all private health insurance spending in 2024**—across services, products, and administration—was only **\$1,644.6 billion (31.16% of NHE)**. The 45% share therefore cannot be defined solely as

repricing private-insurance expenditures. Under nationwide public-and-private fee setting, other portions may potentially be covered, but their precise eligibility must be explicitly demonstrated. These funding categories are not automatically synonymous with potentially excessive service prices.

Correction: Retain Step 48 as a historical illustrative baseline, but do not label the 45% repricing share validated or the 15.82% cut an actionable national target.

Existing model inputs held constant

- Time window: calendar 2025–2054, nominal dollars; baseline 2024 NHE = \$5,278.6B.
- Existing NHE growth assumption: flat 5.4% through 2034, then assumed 4.0% through 2054. Neither is a literal annual CMS projection; the latter is not a CMS forecast.
- Coverage and fee-setting phased in over five years.
- Existing base net additional national expenditure before repricing = **\$25.6601T** over 30 years (more covered services, capacity, delivered deferred care, and no empirically booked cash prevention savings).
- Sum of rollout-weighted status-quo NHE over the 30 years = **\$336.1565T**.
- Sum of rollout-weighted added recurring plus delivered catch-up care = **\$21.8645T**; 50% of this marginal-care amount is price eligible under the model.
- Costs and the net-prevention offset schedule are unchanged from the **base**, so only the existing claims repricing share and optional independent administrative efficiency vary here.

Break-even equation Let s = proportion of existing national NHE actually price-eligible; p = uniform percentage reduction of prices on those eligible paid services. Break-even requires:

$$\$25.6601T - p \times (s \times \$336.1565T + 0.50 \times \$21.8645T) = 0.$$

This is an **accounting scenario identity**, not a demonstration that any service can safely receive that cut. It also inherits the previous model's independent capacity and demand assumptions.

National repricing eligibility sensitivity

Eligible share of all existing NHE	Approximate 2024 eligible pool	Unit price reduction to break even over 30 years	30-year D–A if cut is only 10%	30-year D–A if cut is 20%
20.00%	\$1.056T	32.83%	+\$17.84T	+\$10.03T
25.00%	\$1.320T	27.02%	+\$16.16T	+\$6.67T
30.00%	\$1.584T	22.96%	+\$14.48T	+\$3.30T
31.16% — entire private-insurance funding pool, upper-bound proxy	\$1.645T	22.18%	+\$14.09T	+\$2.53T
35.00%	\$1.847T	19.96%	+\$12.80T	–\$0.06T
41.70% — all private-insurance plus all out-of-pocket, upper-bound proxy	\$2.201T	16.98%	+\$10.55T	–\$4.56T
45.00% — original Step 48 hypothesis	\$2.375T	15.82%	+\$9.44T	–\$6.78T
52.00% — hospital + physician sector totals, not an eligible-payer pool	\$2.744T	13.82%	+\$7.09T	–\$11.49T

Interpretation guard: The 31.16%, 41.70%, and 52% rows are descriptive ceilings or comparisons, not verified eligible spending pools. The 52% hospital+physician total includes government-paid claims and is not equivalent to commercial markups. No row yet identifies a real, coherent service×payer fee schedule.

Independent expenditure anchors and payment evidence

CMS 2024 NHEA facts:

Observed category (2024)	Spending	Share of NHE (rounded)	What it establishes
Total NHE	\$5,278.6B	100%	Total healthcare denominator
Private health insurance	\$1,644.6B	31.16%	Funding source, not fee-repricing eligibility
Out of pocket	\$556.6B	10.54%	Funding source, not necessarily negotiable claim markup
Hospital care	\$1,634.7B	30.97%	Service category containing public and private payers
Physician and clinical care	\$1,109.7B	21.02%	Service category containing public and private payers
Retail prescription drugs	\$467.0B	8.85%	Separate price logic and rebate rules

These service categories and payer categories are **orthogonal dimensions**; summing a payer total to a service total would double count.

Evidence that some hospital commercial rates have room to fall: RAND’s 2024 Round 5.1 claims study found employers/private plans paid hospitals **254% of what Medicare would have paid for comparable inpatient and outpatient services in 2022**, with substantial cross-state variation. A hypothetical 20% decrease from 254% leaves commercial payments at approximately **203% of Medicare**. However, this result applies to **commercial hospital claims within RAND’s dataset**, not to every claim, doctor, drug, nursing home, or dollar of NHE. It cannot establish a national weighted savings percentage on its own.

Evidence that provider solvency cannot be ignored: MedPAC’s March 2026 hospital analysis reported a **6.5% 2024 all-payer hospital operating margin**, but substantial variation: **rural nonmicropolitan hospitals 1.5%** on average versus **6.6% urban**, and a quarter of hospitals had margins below roughly **–2%**. Aggregate fee reductions could produce negative operating margins for fragile facilities if costs do not simultaneously fall, demand/mix do not compensate, and transition funding is inadequate. MedPAC reported a negative **12.1% 2024 FFS Medicare margin**, another reason not to assume a uniform Medicare-level tariff automatically preserves hospital capacity.

As an **illustration only**, a facility with a 6.5% operating margin whose total revenues fall 8% at fixed cost would have a new operating margin of $(0.92 - 0.935) / 0.92 = -1.63\%$; an 8% revenue cut could result from a 20% fee cut applied to 40% of that facility’s revenue. This is not a forecast, and administration/workforce/fixed-cost reductions or added volume can alter the result.

Administrative simplification: distinct second lever

CMS shows government administration and nonmedical insurance expenditures at roughly **7% of 2024 NHE**. Unlike claims price changes, savings here must be modeled as **administrative operating-cost reductions**. They cannot be added to fee cuts if the proposed price savings already include the same administration expense.

Under the **very strong hypothetical assumption** that an independently measured 7%-of-NHE administrative pool can be reduced uniformly with the five-year reform rollout (and no lost functions or offsetting program setup costs), the national sensitivity changes as follows while holding the price-eligible share at **31.16%** of existing NHE:

Admin pool reduction	Cumulative 30-year assumed admin saving	Repricing reduction needed for D=A	30-year D–A at a 20% fee cut
0%	\$0T	22.18%	+\$2.53T
10%	\$2.35T	20.15%	+\$0.17T
20%	\$4.71T	18.12%	–\$2.18T
30%	\$7.06T	16.08%	–\$4.53T

These **are not measured savings opportunities**. Real administrative savings require line-by-line budgets, implementation expenses, and proof that billing/admin savings are not already captured by price changes.

Current decision and research priorities

1. **Correct the denominator:** Build a national cross-tab using CMS’s 2024 spending by service × funding source to identify which **commercial hospital, outpatient, physician, prescription, dental, and other service** dollars are actually subject to new tariffs. The funding source is not the same as the service category. Exclude investment/public health and already-regulated claims unless a specific change is proposed.
2. **Estimate tariff effect, not generic haircut:** Link eligible paid service dollars to comparable contract/Medicare/international price bundles using service weights and actual paid rates. Keep geographic, facility and procedure variation; do not multiply RAND’s 254% hospital ratio by all national healthcare spending.
3. **Apply provider viability guard:** Stress each hospital/clinic cohort’s payer mix and break-even costs under proposed rates, with rural and safety-net protections and capacity investment. Aggregate margin alone is insufficient.
4. **Separate other savings:** Administrative efficiency, prevention/earlier diagnosis, pharmaceutical reforms, unpaid-bill tax effects, fraud reduction, and morbidity/survival adjustments must each have separate, nonoverlapping evidence-backed denominators.

Do not reopen county-by-county provider email requests or local dental pilots as prerequisites for the next national decision. They belong in later implementation checks, not in this national pricing gate.

Source ledger

- CMS, 2024 NHE fact sheet, 2024 funding and major service spending totals.
- CMS, The Nation’s Health Dollar: Where It Came From and Where It Went, 2024 administration, capital, and service mix.
- RAND, Prices Paid to Hospitals by Private Health Plans, Round 5.1, 2022 commercial-to-Medicare comparisons, published December 2024.

- MedPAC, March 2026 Report to Congress, Chapter 3: Hospital Inpatient and Outpatient Services, provider margin, occupancy and adequacy.
- Project baseline: Universal_Healthcare_Step48_Thirty_Year_Integrated_Scenario_Model.xlsx and Universal_Healthcare_ABCD_2025-2054_Provisional_Model.xlsx ; numerical scenario audit from the latter's saved annual base case.

Audit status

Completed here: Accounting denominator reality check, 30-year algebraic break-even repricing sensitivity across existing-NHE eligible shares, non-overlapping illustrative administrative sensitivity, high-level national hospital pricing evidence, provider viability warning.

Not completed: Service-by-payer **measured** eligibility, provider-specific cost feasibility, validated administrative/clinical savings, a national tariff design or tax financing plan. Those figures remain unknown, not zero and not validated by this report.

N.119 Original research Step 119 (historical source; full path in Appendix M)

Universal Healthcare National Model — Step 119

CMS 2024 service-by-payer audit and corrected price-setting denominators

Status: National data reconciliation complete. Repricing eligibility is not yet proven.

Source: CMS National Health Expenditure Accounts (NHEA), NHE2024.csv from 2024 national health expenditures by type of service and source of funds. Amounts below are **2024 actual expenditure flows**, not counts of claims or observations of negotiable fees. Data reported by CMS in millions of dollars; converted to billions here. The accompanying workbook retains source row references and formulas.

1. National reconciliation

- Total national health expenditure (NHE): **\$5,278.588 billion**.
- Personal health care (PHC): **\$4,510.222 billion**; independently summed from ten mutually exclusive major CMS service rows and reconciled to the official control.
- Private health insurance-financed PHC: **\$1,468.135 billion**, or **27.813% of all NHE**. This is different from **\$1,644.592 billion** in all-NHE private-health-insurance spending, which includes non-service spending categories.
- Private insurer-financed hospital care plus physician/clinical services: **\$1,063.995 billion**, or **20.157% of all NHE**.
- Out-of-pocket PHC by summed service categories: **\$556.553 billion** versus official **\$556.554 billion**, a **\$1 million rounding discrepancy** attributable to CMS's publication precision.
- Medicare-financed PHC within these ten service rows: **\$1,045.386 billion**; Medicaid-financed PHC **\$846.058 billion**. Medicaid is reported separately from CHIP. Other programs, including CHIP and other financing streams, remain in the residual column of the workbook.

2. Reconciled service-by-payer spending Values in **\$billions**, rounded to three decimals. "Private HI" and "out-of-pocket" are separate funding sources. The five named payer columns are not all sources; see the workbook's residual column.

Major CMS PHC category	Total	Private HI	Out-of-pocket	Medicare	Medicaid
Hospital care	1,634.738	558.936	40.609	439.834	318.870
Physician and clinical services	1,109.681	505.059	94.260	251.190	112.489
Dental services	189.179	78.170	72.546	12.591	15.191
Other professional services	184.859	57.303	44.815	47.489	17.140
Home health	169.365	37.291	30.368	55.742	38.189
Other nondurable medical products	128.702	0.000	123.230	5.472	0.000
Retail prescription drugs	466.968	172.095	54.973	162.769	53.886
Durable medical equipment	86.358	18.923	35.810	18.472	11.513
Nursing/continuing-care facilities	219.903	19.257	48.699	47.258	78.939
Other health, residential, personal care	320.469	21.101	11.243	4.569	199.841
All PHC	4,510.222	1,468.135	556.553	1,045.386	846.058

3. What this changes in the existing 2025-2054 model Keep the Step 48 model's 30-year rollout-weighted baseline spending, recurring new care, catch-up delivery, clinical cash-offset treatment, and capacity assumptions unchanged. The 30-year **additional spending before repricing is \$25.660147 trillion**. Illustrate the price-cut sensitivity only by changing the eligible portion of 2024 spending, scaling that share over the 30-year baseline and keeping the model's separate assumption that **50% of new care** is subject to the same price reduction.

The pools are conditional comparisons, not measured amounts of legally or economically repriceable claims. They deliberately show the consequence of narrowing the overly broad original 45%-of-NHE input.

Conditional eligible pool	2024 pool, \$bn	All-NHE share	Break-even uniform cut	30-year D minus A, 10% cut, \$T	30-year D minus A, 20% cut, \$T
Private HI hospital and physician/clinical	1,063.995	20.16%	32.61%	+17.79	+9.92

Conditional eligible pool	2024 pool, \$bn	All-NHE share	Break-even uniform cut	30-year D minus A, 10% cut, \$T	30-year D minus A, 20% cut, \$T
All private HI personal health care	1,468.135	27.81%	24.57%	+15.22	+4.77
Private HI plus out-of-pocket hospital/physician	1,198.864	22.71%	29.40%	+16.93	+8.20
All private HI plus out-of-pocket personal care	2,024.688	38.36%	18.35%	+11.67	-2.31
Previous unverified 45%-of-NHE assumption	2,375.365	45.00%	15.82%	+9.44	-6.78

Here **positive D–A means greater cumulative national spending under universal coverage with regulated fees**, before additional uncertain clinical benefits and fiscal financing mechanisms; negative means lower cumulative spending. This is a spending comparison, not a predicted government budget balance.

Model equation, with amounts in \$trillions:

$$D-A = 25.66014663 - \text{price_cut} \times (\text{eligible_NHE_share} \times 336.15653749 + 50\% \times 21.86448778).$$

4. Guardrails and the next step

1. **Do not cut all Medicare and Medicaid expenditures again.** Many already operate under established public payment methods; genuine reform must compare each actual service tariff and financing stream. Public program spending does not automatically belong in the private-sector rate-cut pool.
2. **The entire PHC private-insurance amount is not proven replicable.** It includes categories with different economics, notably retail drugs, long-term care, supplies, dental care, and services already near or below sustainable margins.
3. **Payer spending ≠ fee-price excess.** The observed CMS matrix tells us where dollars flow. It does not tell us the commercial-versus-reference rate on a matched procedure, volume response, which portions are fixed costs, or a safe cut under hospital/clinician operating constraints.
4. The base financial model continues to assume **zero clinical cash savings** from earlier diagnoses until separately supported. Future avoided admissions/costs remain an upside sensitivity only, not a booked offset.
5. **Step 120:** Construct a service-specific, payer-specific price-setting bridge (hospital inpatient/outpatient; physician/clinical; pharmacy; dental; post-acute/long-term care) with a defensible savings denominator, explicit non-cuttable categories, workforce/provider viability thresholds, and low/base/high brackets; then rerun A/B/C/D without quietly altering the access-and-care design.

Bottom line: The existing 45% repricing share was an exploratory hypothesis, not supported by the CMS payer-service cross-tab. The now-observed narrow commercial hospital-and-physician

spending base would require a roughly **32.61% reduction** in that particular funding pool for the same model to break even, whereas assuming all private-insurance-funded PHC is replicable requires **24.57%**. Neither is a policy recommendation or an established feasible rate cut.

N.120 Original research Step 120 (historical source; full path in Appendix M)

Universal Healthcare — Step 120

First national price-setting bridge by service and payer

Status: Quantified service-level sensitivity pass complete; tariff feasibility and provider-level viability are not certified.

Period: 2025–2054. **Basis:** Step 119 CMS 2024 actual spending-by-service/payer matrix and the unchanged Step 48/118 national A/B/C/D model.

What changes here The previous model applied the same price cut to an assumed **45% of all national health spending**, an unsupported denominator. The corrected approach applies **different illustrative fee reductions to mutually exclusive 2024 private-health-insurance-financed personal healthcare service categories**. Expenditure outside those categories is not automatically repriced.

Medicare, Medicaid, and out-of-pocket financing are **excluded from the booked reductions** at this stage. Medicare/Medicaid already have distinct administered payment arrangements. Patient out-of-pocket payments cannot simply be booked as national savings when universal coverage might instead shift the funding burden to the public payer.

No clinical cost reductions, fraud recovery, administrative consolidation, generic-substitution effects, utilization suppression, or pricing of newly delivered extra care are credited here. We do **not** reduce the scope of universal benefits or the planned early-detection program to make the arithmetic work.

1. Rates are hypotheses, not empirical estimates of achievable reductions Private-health-insurance **2024 payer spending** from CMS is expressed in \$billions. Each scenario applies the following percentage to the private-insurance-financed spending in that specific row, not the whole sector and not all payer spending.

CMS service	Private-insured 2024 spending (\$B)	Guarded cut	Conditional middle cut	Aggressive stress cut
Hospital care	558.936	3%	10%	20%
Physician and clinical services	505.059	1%	5%	10%
Dental services	78.170	0%	0%	3%
Other professional services	57.303	0%	2%	5%
Home health	37.291	0%	0%	2%
Other nondurable medical products	0.000	0%	0%	0%
Retail prescription drugs	172.095	0%	2%	5%

CMS service	Private-insured 2024 spending (\$B)	Guarded cut	Conditional middle cut	Aggressive stress cut
Durable medical equipment	18.923	0%	2%	5%
Nursing/continuing care facilities	19.257	0%	0%	0%
Other health, residential, and personal care	21.101	0%	0%	0%
All insured personal healthcare	1,468.135	—	—	—

Interpretation of brackets: Guarded is deliberately small. Conditional middle is a moderate **design test**, not a forecast. Aggressive is a **stress test** to expose what substantial broad reductions would imply for providers; it should not be implemented as a blanket fee cut. Rate values in this table are analyst-selected sensitivities, not observed contractual discounts, tariffs endorsed by CMS, or savings estimates from RAND, MedPAC, or CBO. A future verified fee schedule may produce different results in either direction.

2. Recalculated cash-spending comparison Under the unchanged Step 48 base model:

- 30-year cumulative additional national spending **before price reductions: \$25.660147 trillion.**
- 30-year rollout-weighted existing baseline expenditure: **\$336.156537 trillion.**
- 2024 all-payer NHE scaling denominator: **\$5,278.588 billion.**

The marginal healthcare supplied to newly covered people and the catch-up queue retains its **original cost**, with **zero** additional price savings credited to new services in this conservative calculation. This avoids extending private-insurer repricing estimates to an unmeasured service mix. Clinical cash offsets also remain zero in the base.

For each scenario, the measured expenditure-base reduction is $\text{sum}(2024 \text{ private-insured spending for each service} \times \text{assumed category cut})$. The 30-year existing-spend reduction is that annual amount, divided by \$5,278.588B, times \$336.156537T.

Scenario	Equivalent annual 2024 reduction (B) Reduction as T	30-year D–A total expenditure (\$T)		
No price reductions	0.000	0.000%	0.000	+25.660
Guarded	21.819	0.413%	1.389	+24.271
Conditional middle	86.113	1.631%	5.484	+20.176
Aggressive stress	177.800	3.368%	11.323	+14.337

Positive D–A means total national spending under universal coverage and the tested private-price changes **exceeds** the existing-system trajectory over 30 years. Negative would mean spending below it. These amounts are **not federal budget deficits, tax estimates, net economic welfare, or health-outcome valuations.**

Historical-model contrast: The prior unverified 45%-of-all-NHE, uniform-10%-cut illustration reported +\$9.440T over 30 years and additionally applied the cut to an assumed 50% of marginal new care. This Step 120 result uses **actual CMS private payer category spending**, different cut rates, and **does not credit new-care price reductions**. The results are intentionally not directly apples-to-apples; the purpose is to expose the consequence of removing an unverified savings assumption.

3. Independent primary-source constraints

1. **Hospital fee spread.** RAND's 2024 Round 5 hospital price study found that the privately insured sample paid **254% of simulated Medicare reimbursement** for the same facility-related services in 2022. It included hospital facilities **and associated professional services**, in a different sample/year from the national CMS hospital spending row. It demonstrates substantial pricing differences but **does not imply a safe 60% payment haircut across all hospitals**. RAND primary report.
2. **Clinician fee spread.** CBO's review found commercial physician services averaged roughly **1.3× Medicare FFS**, whereas hospital inpatient and outpatient private rates averaged approximately **1.8× and 2.4×**, respectively, across its reviewed studies. A service mix and geographic adjustment would be required before converting those into an actual unified fee schedule. CBO price-comparison review and CBO policy-options assessment.
3. **Policy response.** CBO estimated that comprehensive competition reforms in its examined framework would reduce commercial hospital/physician prices by approximately **over 1%-3%** in the first decade; transparency reforms **0.1%-1%**; comprehensive level-and-growth price caps could reduce prices by **more than 3%-5% or more**, depending on cap design. **Our scenarios are broader illustrative price-cap tests, not CBO predictions.** CBO, 2022 policy approaches.
4. **Hospital viability.** MedPAC's 2026 March report says 2024 all-payer operating margins for IPPS hospitals averaged **6.5%**, but **other rural hospitals averaged 1.5%**; one quarter of hospitals had an all-payer operating margin below **-2%**. Medicare FFS aggregate margin was **-12.1%**, using a different definition. Applying our high 20% commercial hospital cut to CMS spending amounts to **\$111.787B**, equal to **6.84% of CMS's all-payer hospital-care spending** before any cost adaptation or substitution. A revenue exposure of that scale is a major **viability warning**, not evidence that margins can be reduced by the exact same amount. CMS hospital spending and MedPAC IPPS provider revenues are not identical denominators, so do not mechanically subtract one margin percentage from the other. MedPAC March 2026, Chapter 3.
5. **Physician viability.** MedPAC explicitly notes that it does **not** have all-payer clinician profit-margin data. Therefore the 10% stress-cut row requires direct practice-level assessment of costs, capacity, and incentives, particularly for primary care and underserved specialties. MedPAC March 2026, Chapter 4.
6. **Prescription drugs are a distinct market.** CMS estimated roughly **22% net savings for the initial 10 selected Medicare drugs** under its 2026 negotiation program relative to previous net spending; the selected drugs represent a subset of a single payer's pharmaceutical purchasing, and list-price discounts are not equal to aggregate net drug savings. Our 2%-5% row reductions are placeholders, **not extrapolations from that selected-drug result**. CMS 2026 drug-price-negotiation fact sheet.

4. Required design guardrails for the price-setting system

- Set maximum reimbursement for **the same coded procedure** and **setting** relative to a matched baseline (including inpatient/outpatient distinctions), adjusted for geography, teaching, case complexity, safety-net burden, and genuine service costs.

- Add a **provider viability floor** and stop/review condition for rural hospitals, safety-net facilities, low-margin specialist markets, and clinicians with critical capacity. A flat national percentage is not an executable tariff.
- Separate drug **manufacturer net prices**, pharmacy and PBM spreads, and dispensing fees. Do not simply apply one healthcare-service percentage to a drug's list price.
- Keep long-term care and home health capacity intact; avoid fee changes that restrict the very access and early-intervention benefits the national proposal is intended to provide.
- Set the public program transition explicitly rather than silently cutting Medicare/Medicaid rates, converting copays into imagined savings, or assuming all medical expense is commercial.
- Model the effects on clinician supply, facility closure risk, reimbursement-induced volume changes, and quality. Do not treat every saved price dollar as a net efficiency gain.
- Separate **national healthcare resource spending, public financing, premiums/payroll, and household out-of-pocket burdens**. Cost shifts between these are not systemwide savings.

5. Next scheduled national-model step Step 121: Quantify the other major offsets and administrative changes separately (insurer administration, provider billing burden, pharmaceutical net-price reforms, fraud/error enforcement, uncompensated care and bad debts, and the delayed benefits of earlier diagnosis). Keep the population and care expansions unchanged. Prevent double counting, then combine the verified pieces in the full annual A/B/C/D model and examine 10- and 30-year spending. The actual service-coded fee schedule and provider-capacity safeguards remain **open validation items**, not claimed as finished by this sensitivity pass.

Bottom line: There is credible room to challenge some prevailing commercial prices, especially high hospital rates, but existing payer expenditure is not identical to avoidable markup. In the controlled model, 2024 category-specific cuts of this scale leave a positive 30-year spending difference until other parts of the national reform are modeled and validated. The goal remains a broad, earlier-detection, universal-access system—not simply reducing what the country spends on care.

N.121 Original research Step 121 (historical source; full path in Appendix M)

Universal Healthcare National Model — Step 121

Non-price savings ledger: administrations, errors, drugs, uncompensated care, and early detection

Status: Source denominators and non-duplication rules verified; one additional quantified scenario pool (private-insurer nonmedical expenditure); unproven savings remain at **zero in the booked base**.

Dates: Calendar 2024 for CMS NHEA expenditures; fiscal 2024 for Medicare/Medicaid improper-payment statistics; model years 2025–2054.

Prior model: Preserve the original 26 benefit areas, A/B/C/D national framework, five-year roll-out, 2025–2054 expansion/capacity assumptions, and Step 120 service-specific price sensitivities. Additional clinical benefit is not reduced to save money.

1. Unique ledger entries, distinct from Step 120 provider prices

Possible savings mechanism	Observed national datum	Available for new savings?	New base-case savings booked in this step
Private-insurance administration and nonmedical cost	CMS \$176.458B in 2024 (private HI under nonmedical insurance expenditure row).	A real, separate expenditure pool. New unified claims administration, oversight, staffing, technology and transition costs remain; net savings not yet measured .	\$0 verified; model 20/40/60% conditional net reductions below
Public and other insurance administration	CMS \$372.132B across government administration and nonmedical insurance in 2024, including private \$176.458B.	The full \$372.132B is not eliminable; existing Medicare, Medicaid, other public and nonprivate insurance arrangements still have operating expenses.	\$0 additional
Provider billing/authorization simplification	Provider costs are partly embedded in CMS's \$4.510222T personal healthcare expenditure.	Plausible provider productivity benefit, but no isolated, verified, national 2024 recoverable cost pool; must not double-count the Step 120 cuts to provider reimbursement.	\$0
Medicare/Medicaid fraud and payment errors	CMS FY2024 \$86.52B gross estimated improper payments across Medicare FFS/C/D, Medicaid and CHIP.	Not a fraud estimate or recoverable cash estimate. Includes insufficient documentation, possible underpayments, and payments the reviewer cannot validate.	\$0
Incremental pharmaceutical net-price procurement	CMS retail Rx spending \$466.968B in 2024, including private HI \$172.095B .	Negotiated Medicare prices already scheduled under current law must remain in A's future baseline; Step 120 already applies 0/2/5% cuts to private-HI retail Rx as stress assumptions. Future wider net-price reforms need matched net-price and cohort data.	\$0 beyond Step 120

Possible savings mechanism	Observed national datum	Available for new savings?	New base-case savings booked in this step
Uncompensated care / bad debt / charity care	Measured on different provider accounting bases; a verified national 2024 cost-based, payer-reconciled sum has not been established for this ledger.	Paying a previously unpaid bill may transfer financing , not erase the underlying cost of care. Gross list-price write-offs are not equal to cash loss or dollar-for-dollar tax deductions.	\$0
Earlier diagnosis, screenings, vaccines and prevention	Benefits vary by condition, target population, test, false-positive workup, stage shift, and lag.	Core program goal, with potential health gains even when care cost increases. Cannot credit avoided-treatment cash without evidence on utilization and costs net of screening and follow-up.	\$0 clinical offsets , as in prior base

2024 administration control from original CMS source CMS National Health Expenditure Accounts service × source ZIP, NHE2024.csv, final 2024 column (values in \$millions):

- Total Administration and Total Non-Medical Insurance Expenditures: **372,132**.
- Private health insurance amount nested in this same nonmedical/administrative section: **176,458** (source zero-based CSV row 405; private health insurance line under Health Insurance).
- Other nonprivate and government administration/nonmedical spending residual: **195,674**.
- Independently: all-NHE private-health-insurance spending **1,644,592** less the ten 2024 personal-healthcare category private totals **1,468,135** equals **176,457**; the \$1 million discrepancy is publication rounding.

CMS definition: Nonmedical insurance spending includes insurer operating expenses, billing, reserves, taxes/fees and underwriting gains/losses; it is **not identical to headcount payroll or pure avoidable overhead**. CMS 2024 methodology and CMS NHEA category definitions.

2. Net administration sensitivity — not an implementation forecast

Test a **net** reduction of **20%, 40%, or 60%** of the \$176.458B private nonmedical-insurance expenditure, after replacement public administration. All three are analyst stress parameters requiring an actual transition budget; they are **not supported government cost estimates**. Keep all other public administrative expenditure intact.

Use the same rollout multiplier and 2024-to-future NHE scaling as the established national model:

admin reduction (period) = $(176.458 / 5278.588) \times \text{net reduction fraction} \times \text{sum}(A[\text{year}] \times \text{rollout}[\text{year}])$.

2025–2034 controls: 10-year pre-repricing D–A extra **\$5.955482T**; rollout-weighted A denominator **\$59.554820T**. 2025–2054 controls: 30-year pre-repricing D–A extra **\$25.660147T**; rollout-weighted A denominator **\$336.156537T**. These are verified calculations from audit_results.json and unchanged Step 48 model data.

Scenarios combined with matching Step 120 fee assumptions	Private-admin net reduction	2024 service-price savings		10-year D–A (T) 30 – (B) 2024 admin savings (B) D – A(T)	
		(B)	2024 admin savings (B)	D – A(T)	
Guarded	20%		21.819	35.292	+5.311
Conditional middle	40%		86.113	70.583	+4.188
Aggressive stress	60%		177.800	105.875	+2.755

Positive D–A denotes additional **national health expenditure** relative to the unchanged A trajectory, not a fiscal deficit or a valuation of quality/years of life. The results do not include any gains from new-care tariff reductions, prevented illness, fewer billing disputes, productivity, or fiscal transfer efficiencies. No one has demonstrated that these net insurer-admin cuts are feasible under an actual national public-administration design.

Extreme math-only bound: if **100%** of the 2024 private nonmedical insurance amount were removed with **zero** replacement cost (not realistic), 30-year baseline savings would be **\$11.237T**. Even stacking this impossible ceiling on top of the Step 120 aggressive pricing test would leave **+\$3.100T**, before other cost categories and health benefits are accounted for. This is a sensitivity boundary, not the expected policy outcome.

3. FY2024 improper-payment integrity check

CMS published the following **gross estimated improper-payment** amounts (billions), using each program’s measurement methods:

Program	FY2024 estimated improper amount (\$B)
Medicare fee-for-service	31.70
Medicare Part C / Medicare Advantage	19.07
Medicare Part D	3.58
Medicaid	31.10
CHIP	1.07
Arithmetic sum (not net recoverable money)	86.52

CMS says **79.11% of Medicaid’s 2024 improper payments involved insufficient documentation** and explicitly explains that improper-payment totals are not fraud rates. CMS FY2024 fact sheet. GAO also reports that existing CMS actions **prevented an estimated \$11.906B over FY2022-FY2024** in potentially fraudulent Medicare payments; these are historical prevention/avoidance estimates, **already-existing action**, and may not be counted again as newly produced annual savings from universal coverage. GAO 2026.

When a future integrity design supplies a baseline **monetary-loss** subset, recovery fraction, new administrative enforcement expense, and comparison with already operating CMS programs, that difference can enter the model once. Until then the fiscal offset remains zero.

4. Medical debt, drugs and the 10-year prevention goal

Uncompensated care: Keep separate **(1)** billed charges, **(2)** actual provider costs, **(3)** bad debt, **(4)** charity care, **(5)** public disproportionate-share and other support, **(6)** privately financed cost

recovery, and **(7)** any tax treatment. If a universal payer now pays a formerly uncollected charge, the provider improves cash collection but public payment rises; only changes to **resource cost**, leakage, administration or collections are national savings. The IRS's bad-debt and charitable-hospital rules distinguish write-offs, deductions and tax-exempt hospital reporting—no dollar-for-dollar federal credit can be assumed. IRS business bad debts; IRS Form 990 Schedule H.

Drug pricing: Price a **common net unit** (after rebates/fees and including manufacturers, PBMs, pharmacies and dispensers) for matched products and program cohorts. CMS estimates its initial ten selected drugs, already part of law, would have generated ~\$6B less net Medicare spending at 2023 prices if effective then. That cannot be represented as a new savings item on top of an A baseline that already includes the enacted program or the Step 120 retail-Rx assumptions. CMS 2026 negotiated-price fact sheet.

Earlier detection: Preserve the central ambition: more people receiving care, greater early-stage discovery, treatment sooner, and improved survival and functioning over 10+ years. Maintain **two different output ledgers**:

1. **Clinical/social value:** stage at diagnosis, preventable admissions, mortality, quality-adjusted life years, years of functioning, access, financial protection, labor participation, and caregiver burden. These benefits are valid even if aggregate spending does not decline.
2. **Measured healthcare cash savings:** incremental cost of screening and referrals + false positives/overdiagnosis + new treatments + surviving patients' lifetime care, offset by independently supported avoided late-stage treatment and emergencies. Model each disease/program by timeline (0–4 years, 5–10 years, 11–30 years); no invented blanket annual reduction.

CBO explains that prevention can decrease or increase total health spending depending on screening, follow-up, disease outcomes and longevity. This means **we should defend targeted evidence-based screening**, not abandon the early-detection goals, while keeping invented cash savings out of the financial base. CBO prevention methodology. USPSTF also treats false positives, overdiagnosis and harms as program-design inputs. USPSTF methods.

5. No-double-count checklist, and where we go next

- Private insurer **nonmedical costs** are separate from CMS PHC provider claims; applying both distinct categories can be additive once, but the new public administration must be subtracted first.
- Provider administrative efficiency may make **the same Step 120 lower fees viable**; don't subtract it again nationally if passed through to cheaper provider fees.
- Medication discounts already captured in retail-drug Step 120 or already enacted Medicare negotiations are not standalone additional offsets.
- Provider write-offs and insurer denial/collections revenue transfers are not independent national healthcare resource savings.
- Existing fraud prevention is not newly caused by a different payer. Separate **overpayment recovery, improper paperwork, avoided costs, and program costs**.
- Earlier diagnosis is a potential delayed clinical benefit and/or cost avoidance; the 26-benefit scope, first-year catch-up spike, and 10-year gains remain in the study, not arbitrarily stripped out.

Next national step: Prioritize a small, high-leverage **outcomes-by-condition** module for the early-detection pathways already in the plan (diseases with strong evidence and measurable stage shifts) and an explicit **administration-transition resource budget**. Those let us distinguish improved health from actual net cash savings before recalculating the comprehensive A/B/C/D 10- and 30-year comparison. Keep any remaining unknown amount at zero rather than filling the model with guessed recoveries.

N.122 Original research Step 122 (historical source; full path in Appendix M)

Universal Healthcare National Model — Step 122

Earlier detection, follow-through, and 5/10/20/30-year health outcomes

Status: National screening coverage baselines established, incremental throughput scenarios calculated, trial evidence bounded to eligible cohorts, and clinical/cost ledgers separated. This is a conditional capacity/outcome bridge, **not** a validated population health forecast or a new savings credit.

Framework carried forward unchanged: all 26 covered benefits; one primary public payer with independent care delivery; national regulated service prices; A = current coverage/current prices, B = universal/current prices, C = current coverage/regulated prices, D = universal/regulated prices; five-year rollout; initial catch-up/utilization spike; model years 2025–2054. No outreach, sending, or external coordination is part of this study.

1. The national screening gap is large and concrete

The CDC analyzed nationally representative **2023 NHIS** responses (published 2025). In the table below use the CDC's **population-weighted actual-sample estimates**, not age-standardized estimates: the age-standardized CRC value is 63.5%, whereas the population-weighted estimate is **67.4%**. CDC 2023 screening report.

Each row is a **different eligible population**; do not add across rows or equate the numbers with unique people. The two target columns are model-design alternatives, **not forecasts** or claimed national targets. Each value is the number of **additional people current on screening per 100,000 in that row's eligible population**.

Screening cohort (survey definition)	2023 observed	First improvement assumption	Higher-uptake assumption	Additional up-to-date per 100k (first / higher)
Colorectal: adults 45–75	67.4%	77.4%	87.4%	10,000 / 20,000
Breast: women 50–74	80.0%	90.0%	95.0%	10,000 / 15,000
Breast: women 40–49 , mammogram within 2 years	62.1%	72.1%	82.1%	10,000 / 20,000
Cervical: eligible women 21–65 (excludes prior/unknown hysterectomy in survey)	75.4%	85.4%	95.4%	10,000 / 20,000

Comparability notes: The 2023 breast-study primary population was age 50–74; its separate age-40–49 recent-mammogram estimate does not make the two lines one continuous age-standardized series. USPSTF's **2024** recommendation expanded average-risk biennial mammography to **ages 40–74**, so implementation must build the real 40–74 eligible denominator and avoid overlapping the two shown subgroups. Cervical-screening denominators require age, relevant anatomy, prior surgery, and guideline criteria; the survey's respondent categories do not define all eligible people

in a universal program. Screening means up to date with recommended intervals, not a new annual test for everyone. CDC; USPSTF breast guideline.

Important distributional signal: Only **37.1%** of adults aged 45–49 reported up-to-date CRC screening, against **73.4%** among 50–75-year-olds. A national pathway cannot allocate all colorectal resources using the overall 67.4% rate; the newly eligible ages require disproportionate outreach and first-cycle appointment capacity. CDC.

2. Colorectal screening requires a complete referral pathway

For a bounded, **first-cycle** capacity illustration, take 100,000 colorectal-screening-eligible adults. Moving from 67.4% to 77.4% current yields **10,000** additional people; moving to 87.4% yields **20,000**. If all those additional screenings used **one FIT each** (an explicit hypothetical mix, **not** recommended for everyone):

First-cycle sensitivity	+10,000 people screened	+20,000 people screened
FITs needed	10,000	20,000
Positive FITs at 8.3–9.4% local-program positivity	830–940	1,660–1,880
Colonoscopies completed if 85% of positive FITs get follow-up	~706–799	~1,411–1,598
Colonoscopies completed if 53.2% do so	~442–500	~883–1,000
Extra colonoscopy throughput needed to raise follow-up from 53.2% to 85%	~264–299	~528–598

Evidence boundary: An observational **San Francisco safety-net** study found **8.3% overall FIT positivity, 9.4% on initial tests**, and **1,558 follow-up colonoscopies among 2,930 positive results (53.2%)**. It did not estimate nationwide positivity, referral performance, or diagnostic yield for people who would enter after a universal policy. The 85% completion assumption is **our capacity-design scenario**, not a verified attainable national rate. The colonoscopies represent one round only; annual FIT retesting and abnormal results at later rounds require a separate sustainable scheduling plan. Original clinical study, CDC archival record.

Operational consequence: a screening invitation is not completed prevention. Reserve endoscopy, pathology, navigation, transport, consultation, and cancer-treatment capacity **at the same time** as screening kits. A wave of more detected lesions and earlier-stage cancers in the early years is an expected **case-finding increase**, not proof incidence suddenly rose or that the policy failed.

3. Two proven chronic-disease pathways—appropriately bounded

Diabetes prevention The NIH/NIDDK’s randomized Diabetes Prevention Program (DPP) enrolled adults at elevated diabetes risk. Intensive lifestyle intervention reduced diabetes development **58% over about three years** versus placebo; among participants followed for ten years, the reported cumulative reduction/delay was **34%**, with onset roughly **four years later**. This is a result among trial-comparable high-risk participants receiving the program, **not** a 34% population-wide incidence reduction. NIDDK DPP/DPPOS.

For planning, define H = high-risk participants who complete a comparable intervention, and p10 = their expected 10-year diabetes incidence without the intervention. Then a trial-effect-transfer

illustration is $0.34 \times H \times p_{10}$ fewer/delayed cumulative diagnoses at year 10. If a notional cohort would otherwise have **1,000** diabetes diagnoses in the period, a trial-equivalent effect would mean **~340 fewer/delayed** at that checkpoint. H, p_{10} , completion, selection bias, real-world effectiveness, and duration remain **unquantified nationally**; do not book 340 as permanent cures or avoided lifetime care cost.

Track: risk assessments completed, evidence-based program starts, adherence, measured risk-factor change, diabetes onset, and renal/eye/cardiovascular complications over longer horizons. Budget the coaches, labs, counseling, and ongoing support in the 26-benefit coverage design.

High-risk hypertension and cardiovascular outcomes SPRINT studied **9,361 higher-CV-risk adults without diabetes or prior stroke**, comparing intensive versus standard systolic-BP targets. Its final adjudicated analysis (median intervention follow-up **3.33 years**) reported major CV events at **1.77% vs 2.40% per participant-year**, with hazard ratio **0.73**. The normalized absolute trial difference is **0.63 percentage points, or ~63 fewer events per 10,000 comparable participant-years**. Crucially, intensive care also caused **more serious hypotension, electrolyte abnormalities, acute kidney injury/failure, and syncope**. SPRINT final RCT report.

This is an **eligible trial-person-year difference**, not an annual reduction to assign to the entire US population, all people with hypertension, or all 30 model years. Program coverage means diagnosis, adherence, evidence-based individualized treatment, home measurements where useful, monitoring for harms, and follow-up—not automatically intensifying everybody to the trial’s lower target.

4. National 5/10/20/30-year impact tracking

Horizon	What the system does	What we measure	Interpretation
Years 1-5 / 2025-2029	Expand access, close overdue screening gaps, run follow-up queues, enroll chronic-risk cohorts, add diagnostic and clinical staffing.	Up-to-date screening rates by age/risk/geography , referral completion time, initial positive findings, treatment-start interval, new diagnoses, adverse-test effects, diagnostic capacity/waitlists.	More visits, tests, early diagnoses, and catch-up spending are plausible—even desirable when unmet need was real.
Years 6-10 / 2030-2034	Maintain repeat screening and chronic prevention, strengthen completed referrals, build stage and prevention outcome series.	Stage-at-diagnosis distribution, interval cancers, 10-year diabetes incidence/delay in eligible cohorts, avoidable acute admissions, risk-adjusted cardiovascular events and serious harms.	Clinical effects begin to be observed; causality must be evaluated against matched trends rather than assumed.
Years 11-20 / 2035-2044	Sustain prevention and ongoing disease management for a larger covered population.	Disease-specific mortality, advanced complications, years of healthy functioning, long-term disability, renal/vascular outcomes, caregiver burden.	Larger cumulative health outcomes are possible; no preassigned 10-year break-even date.

Horizon	What the system does	What we measure	Interpretation
Years 21-30 / 2045-2054	Maintain access and quality and update care as population ages and survives longer.	Lifetime patient outcomes, preventable deaths, long-term support use, total lifetime healthcare and nonmedical effects, fiscal effects separately.	More survival can raise later health spending even while the program substantially improves welfare.

Pathways retained without a new deep dive: targeted lung cancer screening for actually guideline-eligible high-risk people; vaccination; oral/dental preventive care; mental-health and addiction early intervention; reproductive and pediatric screening; kidney and vision monitoring for diabetes; and timely primary-care follow-up. These remain inside the original **26** benefits rather than being excluded for lack of a single mature cash-savings estimate.

5. Link to Steps 120-121 without double counting

Per clinically distinct eligible pathway, the healthcare spending difference must ultimately be:

incremental screenings + abnormal-result workup + early treatment + navigation/staffing + monitoring/false-positive harm + subsequent longer-life treatment – genuinely avoided late-stage/emergency care.

The first five terms are **real resource demands**. Some initial workload is already provisionally embodied in the existing coverage expansion, recurring utilization and catch-up assumptions of the D–A model; **do not charge it twice** by appending a fresh national screening budget on top. Conversely, do **not** subtract an unproven universal 5/10/20% long-run care-saving factor. Clinical outcomes are tracked even if cash spending rises. Step 121's non-price-ledger **\$0 booked additional clinical savings** therefore stays in place for now.

Still needed for a defensible national dollar and case estimate (next bounded step, not re-opened research today): (1) age/sex/risk-eligible US headcounts with mutually exclusive cohorts; (2) a nonoverlapping annual services tally for each screening interval and follow-up mix; (3) capacity and year-by-year ramp including the initial backlog; (4) observed implementation/completion effectiveness versus trials; and (5) diagnosis-stage/complication outcomes and matched incremental costs. Those feed the fixed 2025–2054 A/B/C/D cost model once, not as additional speculative credits.

Bottom line / checkpoint

Step 122 closes a concrete gap: CDC-measured national screening deficiencies now translate into **10,000-20,000 more people current per 100,000 eligible** under explicit high-uptake assumptions, with a first-cycle endoscopy-throughput constraint attached. Separate rigorous trials substantiate **delayed diabetes and fewer cardiovascular events in eligible treated populations**. Neither clinical result has been mislabeled a nationwide benefit forecast or a booked dollar saving.

Step 123: apply published national eligible-population denominators to convert these normalized pathways to **real US annual capacity volumes**, establish nonoverlap with the prior 26-benefit utilization allowances, then move immediately to the next national-system decision. Avoid another disease-by-disease research detour.

N.123 Original research Step 123 (historical source; full path in Appendix M)

Universal Healthcare National Model — Step 123

Verified 2025 eligible-age population, national screening headcounts, and annual incremental capacity

Result: Real 2025 U.S. age/sex population denominators have been matched to the Step 122 screening-gap assumptions, with five-year new-patient and repeat-service workloads separated. **Observed denominator ≠ clinically eligible denominator ≠ screened patients ≠ annual services.** The national A/B/C/D financial workbook is deliberately **not** changed or double-charged.

Project controls carried forward: All 26 benefit categories; current/regulated prices crossed with current/universal coverage as A/B/C/D; a five-year hypothetical rollout; additional catch-up care initially; national outcomes across 2025–2054; independent providers and a single primary public payer. No emails, outreach, or external actions.

1. Source, cohort crosswalk, and reproducibility

Population: U.S. Census Bureau Vintage 2025 single-year age/sex resident estimates / dataset listing, July 1, 2025, **field POPESTIMATE2025**. The CSV contains 306 observations: sex codes 0 (both), 1 (male), 2 (female); ages 0–99, 100+, plus a separate total-age 999. Sum **ages only 0–100**, never the 999 total row. Census’s file layout is the definition control.

The extract was checked against the already-completed **Step 54** Census calculation; it exactly reproduced **341,784,857 all residents, 120,893,621 people aged 45–75, and 20,356,102 people aged 45–49**. Thus this is an extension of, not a replacement for, our existing population work.

Screening rates: CDC analysis of **2023 National Health Interview Survey**, Use of Cancer Screening Tests, United States, 2023, published 2025. We use **unstandardized survey estimates** for the count bridge: colorectal 67.4% ages 45–75, breast 80.0% ages 50–74, cervical 75.4% ages 21–65, and mammogram within 2yr 62.1% ages 40–49. The **63.5%** CRC age-standardized figure is **not** the population-count multiplier.

Cross-year warning: Applying a 2023 screening percentage to the July 2025 population creates an **illustrative 2025-sized unmet-need scenario, not an observed 2025 screening count**. Survey sampling/error, age cohort change, and access trends are not silently erased.

Nonoverlapping within-pathway demographic cohort	Census sex/age filter	2025 U.S. residents
Colorectal screening age band	Both sexes, ages 45–75	120,893,621
Breast-screening younger age band	Female, 40–49	21,525,076
Breast-screening older age band	Female, 50–74	50,972,956
Breast combined 40–74 (two bands only)	Female, 40–74	72,498,032
Cervical demographic ceiling	Female, 21–65	98,862,847

Crucial eligibility caveat: The Census female age group is not an exact clinical screening denominator. CDC’s cervical survey excludes some people with prior/unknown hysterectomy; eligibility also depends on clinical history, anatomy, and guidance. Hence **98.863M is a gross population ceiling**, and any implied cervical screening-gap count below is an **upper-bound exercise**, not a validated national count. Conversely, clinical screening for certain people outside Census’s female category must be handled in the eventual patient registry. Breast subgroups can be summed

only within breast screening; people may belong to breast, colorectal and cervical screening populations simultaneously, so **never add the condition rows to report unique people.**

2. National screening gap under the two illustrative improvement assumptions

First target uses +10 percentage points for each line. **Higher target** uses +20 points except older breast (capped at +15 points, to 95%). These are planning sensitivities, not expected/achieved uptake or official health targets.

Pathway	Observed 2023 percentage	2025-sized population	First-target additional up-to-date people	Higher-target additional up-to-date people
Colorectal 45-75	67.4%	120,893,621	12,089,362 (77.4%)	24,178,724 (87.4%)
Breast 40-49: mammogram in past two years	62.1%	21,525,076	2,152,508 (72.1%)	4,305,015 (82.1%)
Breast 50-74	80.0%	50,972,956	5,097,296 (90.0%)	7,645,943 (95.0%)
Breast 40-74 combined, nonoverlapping ages	Two age-specific rates	72,498,032	7,249,804	11,950,958
Cervical 21-65 (gross demographic ceiling)	75.4% among screen-eligible survey respondents	98,862,847	≤9,886,285 at +10pp	≤19,772,569 at +20pp

For the colorectal cohort alone, a scenario holding the 2023 rate constant on the 2025 population implies **~39.41M not current**, of whom ~12.09M or ~24.18M would move to current screening under the first/higher improvement. **Not current is not the same as never screened.** The 2023 CDC study separately found only **37.1%** current at ages 45-49; the service rollout must prioritize this recently eligible group rather than allocate visits uniformly.

3. Five-year first-service capacity: persons are not annual procedures

To create an operational **stress test**, assume an even five-year catch-up in newly up-to-date people for each pathway, while holding the 2025 eligible headcounts and target levels fixed for this scheduling illustration. Real annual delivery will differ because of age migration, deaths, births into age ranges, patient preferences, missed visits and local constraints.

Pathway	Newly current per modeled year, first target	Newly current per modeled year, higher target	What this number actually measures
CRC 45-75	~2.418M	~4.836M	First completion of the overdue screening pathway per year; not repeat FITs, colonoscopies or unique people nationwide

Pathway	Newly current per modeled year, first target	Newly current per modeled year, higher target	What this number actually measures
Breast 40-74	~ 1.450M	~ 2.390M	New participants brought up to date per year; repeat biennial mammograms additional
Cervical 21-65	≤ 1.977M	≤ 3.955M	Gross demographic ceiling on first/overdue completions per year; clinical eligibility refinement needed

3A. Colorectal route choice changes the procedure capacity radically The path must support **at least two separate modalities**, without mixing their workload:

1. **Direct-colonoscopy illustration:** If all newly caught-up colorectal adults chose colonoscopy, an even catch-up would require ~**2.418M** / ~**4.836M incremental initial colonoscopies per year** for five years, before workups for other indications. This is a route-choice boundary, **not a recommendation or demand forecast**; negative screening colonoscopies generally do not recur annually.
2. **All-FIT-first illustration:** If all newly caught-up adults instead each received an initial FIT, the first five-year enrollment wave needs ~**2.418M** / ~**4.836M additional initial FITs per year**, plus follow-up diagnostic colonoscopies for positives.

An observational **2010-2015 San Francisco safety-net** FIT study measured **8.3% overall positivity, 9.4% first-round positivity**, and **53.2% of positive results with follow-up colonoscopy**. For an explicitly aspirational **85% completed follow-up** capacity assumption, the initial newly screened cohorts imply:

FIT-first capacity sensitivity	First target: +12.09M first-cycle FITs	Higher target: +24.18M first-cycle FITs
Positive initial tests if 8.3-9.4% program-specific range transferred	~ 1.00-1.14M	~ 2.01-2.27M
Completed diagnostic colonoscopies at 85% follow-up	~ 0.853-0.966M	~ 1.706-1.932M
Same colonoscopies averaged over five annual new-entry cohorts	~ 171-193k/year	~ 341-386k/year

This cohort's local positivity is **not a national estimate**, predates current screening and includes ages 50-75 rather than all ages 45-75, and the assumed 85% completion is **not a demonstrated national performance**. Original FIT study. The numeric fit is therefore an explicit **capacity sensitivity**. Real service planning must incorporate primary-colonoscopy shares, actual FIT positivity, pathology, false-positive workups, age effects, time-to-colonoscopy, and route switches.

Ongoing capacity flag: An annual-FIT strategy requires repeat FITs from enrolled people after their initial year unless clinical follow-up has shifted them to another route. If no one switched out and all remained in annual FIT, the incremental Year-5 running cohort would generate as many as

~12.09M / ~24.18M annual FIT kits, on top of preexisting FIT use; this is a **gross all-FIT continuation ceiling**, not a prediction. Never multiply first-cycle colonoscopy results by each of 30 years or overlook annual retesting.

3B. Breast mammography: separate uptake from repeat service The current USPSTF recommends **biennial screening mammograms at ages 40-74**. USPSTF 2024 guidance. Under a simple scheduling illustration with each new group receiving its first mammogram on entry and repeats **two and four years later**, five equal enrollment cohorts yield:

Incremental mammography scheduling view	First target	Higher target
Newly current people by end of Year 5	7.250M	11.951M
First-entry mammograms each of Years 1-5	1.450M/year	2.390M/year
Year-5 mammograms including repeats	~4.350M	~7.171M
Total incremental mammograms over Years 1-5, including within-window repeats	~13.050M	~21.512M
Long-run annualized mammograms for that added fully established cohort	~3.625M/year	~5.975M/year

These are patient-scheduling stress numbers with static cohort size, 100% repeat adherence and no exits. Abnormal-result diagnostic imaging/biopsy and cancer-treatment starts are **additional service pathways** but cannot be assigned without a study-matched recall/diagnostic yield. **Do not add 40-49 and 50-74 again:** they are already included once in the combined 40-74 row.

3C. Cervical screening: age headcount available; clinical and interval denominators still gated **98.863M** is only the Census female 21-65 resident age-band headcount, so the **≤9.886M / ≤19.773M** additional-current counts and **≤1.977M / ≤3.955M first tests per year** are **ceiling-type planning expressions**, not actual clinician-eligible demand. Screening cadence varies by age/test strategy and may be at **three- or five-year intervals** as captured in CDC's 2023 measurement. Do not turn this demographic ceiling into a booked test bill or all-person repeat series until hysterectomy/other exclusions and test mix are resolved.

4. Reconcile with the existing national cost and benefits model

The locked 2025-2054 A/B/C/D workbook currently models **aggregate dollars**, not unique patient-level procedure counts:

Already modeled expense mechanism	Existing baseline assumption	How Step123 relates	New monetary posting
Recurring new covered care	6% of applicable baseline expenditure in Step48 base case	Some screening, follow-up and earlier care already conceptually belong here; no matching service ledger to isolate the fraction	\$0
Initial unmet-care/catch-up flow	Delay queue, with 3% maximum annual delivery cap in Step48 base scenario	First-time screenings and newly detected conditions may occupy this queue, but queue is dollars , not people	\$0
Capacity investments	1% facilities/workforce provision in Step48 base case	Colonoscopy/endoscopy staffing, pathology, imaging and navigation may require resources; scope overlap not yet quantified	\$0
Avoided future episodes	Prior Steps121–122 keep unsupported clinical monetary offsets at zero	Health gains do not directly imply a net resource saving; avoided event counts and matched costs uncalibrated	\$0

These numbers are from the existing provisional A/B/C/D report and Step121 ledger. The correct next computational operation is **replace** part of the existing aggregated new-care allowance with properly priced and completed service counts, or **demonstrate** that a proposed service is outside it, never simply **add** procedure costs on top. National patient counts cannot be converted to expenditure without procedure cost, exact mix, timing, marginal vs baseline utilization, and facility workforce nonoverlap. No change to Step121/120 financial figures or the 26-benefit scope is justified by this headcount calculation alone.

5. National 30-year bridge and finish line

The Step54 **cohort-rebased, not Census-official projected** age45–75 series grows from **120.894M (2025)** to **138.498M (2054)**. If the same illustrative +10/+20 percentage-point screening-status advantage were maintained in **2054**, it would correspond to **~13.850M / ~27.700M** more 45–75-year-olds up-to-date at that year's point in time, **not** new unique persons or annual test procedures. Later-year populations for breast/cervical need separately rebased female cohorts and age-eligibility switches; avoid pretending today's 2025 count stays fixed for 30 years.

Step123 achieved:

- Four real 2025 Census age/sex screening-population denominators, cross-checked with Step54.
- Nationwide conditional improvement headcounts by nonoverlapping age cohorts, with cervical eligibility clearly bounded.
- First five-year catch-up throughput and two clearly separate modalities for CRC; recurrence-aware mammogram volumes.
- Explicit patient-versus-service, first-cycle-versus-repeat, observed-versus-scenario, and financial-overlap controls.

Next bounded national action (Step124): Put these derived five-year screening capacities into the **existing 26-benefit/30-event demand register** as separate nonmonetary rows, including clinical eligibility and modality-mix unknowns. Compare to provider capacity once at national level and then advance the consolidated A/B/C/D scenario. No further individual-disease research round unless a missing variable materially changes the national decision.

N.124 Original research Step 124 (historical source; full path in Appendix M)

Universal Healthcare National Model — Step 124

Screening demand integration schedule and national capacity check

Status: National capacity comparators checked and a **nonmonetary integration schedule** prepared. **Not merged into the authoritative Step 107 3,600-row demand register:** its actual source bytes and exact 30-event-family keys are unavailable in the present project files. Do not represent this report as an update to that register. The existing A/B/C/D financial workbook is unchanged.

Scope retained: 26 benefit lines, 30 canonical event families, four scenarios × 30 model years (2025–2054) = 3,600 event-family positions, universal B/D uptake assumptions versus status-quo A/C, hypothetical five-year rollout and delayed-care effects, no new financial saving booked. All 26 benefit categories remain covered, even though this short integration schedule concerns only three high-leverage screenings.

1. Observed national procedure supply and what it does not show

Observed national comparator	Amount	Period / reporting basis	Important limitation
Mammography procedures	45,083,719/year	FDA MQSA statistics as of October 1, 2026 ; historical annual procedure counts reported by reaccrediting facilities	Includes types of mammography procedures, reporting updates occur in three-year reaccreditation cycles, excludes VA; not available spare slots.
Certified mammography facilities	9,137	FDA, October 1, 2026	Facility accreditation does not establish clinical staff, scheduling availability or geography.
Accredited mammography unit entries	27,865	FDA, October 1, 2026	2D and tomosynthesis accreditation entries can describe the same hardware ; do not divide procedures by entries and infer physical machine productivity.
Colonoscopies actually performed, estimated	15,474,990/year	Published 2025 original U.S. epidemiologic/claims analysis; 2022 procedure estimate	All clinical indications, not screening-only, not spare colonoscopy capacity or a recent workforce census.

Sources: U.S. FDA MQSA national statistics; Peery et al., Gastroenterology 2025, DOI 10.1053/j.gastro.2024.12.029 and journal table text. The colonoscopy number is an **estimate using historical claims**, not an FDA-equivalent administrative count.

No nationwide available-capacity count has been established. A total workload ratio measures the possible scale of expansion, not whether facilities can absorb it. Even a modest national fraction can be impossible in areas with no staffed slots or distant specialists.

2. Incremental annual workload compared to observed national use

All added screening activity below comes from Step 123's **2025 Census denominator + CDC 2023 utilization rate + hypothetical uptake targets**. They are neither real 2025 claims nor a validated 2026-to-2029 policy forecast. **Percentage = incremental procedures ÷ observed/estimated national annual procedures**, not a claim of spare slots.

Procedure stream	Five-year-rollout annual extra demand (first / higher scenario)	Comparison with observed national annual throughput	Operational read
Screening mammography, Year 5 including two-year repeats	4.350M / 7.171M	9.65% / 15.91% of FDA's 45.084M reported annual mammography procedures	Large incremental imaging, reading, callback, and biopsy coordination workload; real capacity needs staffing and geographic analysis.
Colonoscopy for positive initial FITs , annual average over each of five new-entry cohorts	0.171-0.193M / 0.341-0.386M	1.10-1.25% / 2.20-2.50% of estimated 15.475M annual colonoscopies	Smaller share of all colonoscopies, but particularly time-sensitive and not substitutable by repeat stool testing after a positive.
Direct screening colonoscopy if 100% of newly caught-up CRC adults chose that test, annual average	2.418M / 4.836M	15.62% / 31.25% of estimated 15.475M annual colonoscopies	Very large share of current national throughput; represents a different modality scenario from all-FIT, never add this row to FIT-first diagnostic follow-ups .

The FIT-positive first-test positivity range **8.3-9.4%** comes from a **2010-2015 San Francisco safety-net** study, not a representative modern national sample; an **85% completed diagnostic follow-up** rate is a chosen throughput target. Original FIT cohort. Thus endoscopy referral counts remain **conditional**, with neither nationwide colonoscopy slot availability nor positive rate measured for the marginal enrolled group. Mammography screening guidance is biennial at ages 40-74. USPSTF.

3. Five-year nonmonetary integration schedule, 2025-2029

These are modeled **increments above A/C** for hypothetical universal-access **B/D**. They are **newly up-to-date patient-pathway entrances or procedures**, according to each row's unit. The 2025-

2029 dates are model years, not evidence that a policy went into force then. Numbers are millions unless noted. Flat same-size entry cohorts and perfect two-year mammography adherence are **scheduling stress assumptions**.

Editorial typesetting note: The ten original rows are displayed as individual five-year records to preserve legibility. Historical measures, values, and event-gate notes are unchanged.

01. Colorectal catch-up (routine preventive, line 1), first target

Unit: People newly current, M

2025	2026	2027	2028	2029
2.418	2.418	2.418	2.418	2.418

Distinct event / gate: Exposure only. Choice of FIT vs direct colonoscopy is unresolved; do not also count as a procedure.

02. Colorectal catch-up, higher target

Unit: People newly current, M

2025	2026	2027	2028	2029
4.836	4.836	4.836	4.836	4.836

Distinct event / gate: Alternative higher scenario, not additive.

03. Initial FIT tests if 100% choose FIT** (laboratory/pathology, line 8), first / higher**

Unit: Initial kits, M

2025	2026	2027	2028	2029
2.418 / 4.836	2.418 / 4.836	2.418 / 4.836	2.418 / 4.836	2.418 / 4.836

Distinct event / gate: One initial FIT per newly caught-up person; all-FIT alternative only. Repeats are **additional and unquantified** after each cohort's first year.

04. Follow-up colonoscopies after initial positive FIT** (outpatient procedures, line 11), first**

Unit: Procedures, thousands, range

2025	2026	2027	2028	2029
171-193	171-193	171-193	171-193	171-193

Distinct event / gate: Requires positive initial FIT and completed diagnostic referral; follow-up rates and real positivity unknown.

05. Follow-up colonoscopies after initial positive FIT, higher

Unit: Procedures, thousands, range

2025	2026	2027	2028	2029
341-386	341-386	341-386	341-386	341-386

Distinct event / gate: Alternative high scenario, not additive.**06. Direct screening colonoscopy** if all choose that route (outpatient procedures, line 11), first / higher****

Unit: Primary procedures, M

2025	2026	2027	2028	2029
2.418 / 4.836	2.418 / 4.836	2.418 / 4.836	2.418 / 4.836	2.418 / 4.836

Distinct event / gate: Mutually exclusive with all-FIT row; do not stack. Follow-up surveillance later is unresolved.**07. Mammography newly enrolled (routine preventive, line 1), first / higher**

Unit: People, M

2025	2026	2027	2028	2029
1.450 / 2.390	1.450 / 2.390	1.450 / 2.390	1.450 / 2.390	1.450 / 2.390

Distinct event / gate: Enrollment only, not an imaging service in addition to the row below.**08. Mammography screening procedures** with two-year repeats (imaging, line 9), first****

Unit: Mammograms, M

2025	2026	2027	2028	2029
1.450	1.450	2.900	2.900	4.350

Distinct event / gate: First test at enrollment, repeat at +2 and +4 years where due.**09. Mammography screening procedures with repeats, higher**

Unit: Mammograms, M

2025	2026	2027	2028	2029
2.390	2.390	4.780	4.780	7.171

Distinct event / gate: Alternative high scenario, not additive.

10. Cervical screening catch-up demographic ceiling** (preventive/labs, lines 1/8), first / higher**

Unit: Initial tests, M, upper bound

2025	2026	2027	2028	2029
≤1.977 / ≤3.955	≤1.977 / ≤3.955	≤1.977 / ≤3.955	≤1.977 / ≤3.955	≤1.977 / ≤3.955

Distinct event / gate: Not a forecastable service count until hysterectomy and other eligibility exclusions, modality and interval mix are known.

Additional relevant benefit routing: positive mammograms may produce follow-up diagnostic imaging (imaging, line 9), tissue biopsy and results (outpatient, line 11, and pathology, line 8), and cancer treatment (oncology, line 12); case management and reminders belong to the established navigation/telehealth benefit (line 26). Clinical follow-up components from one episode must be assigned to the correct event/cost level **once**; billing-code components do not prove separate patient events. No new numeric follow-up volumes have been assigned to mammography or cervical procedures because national recall/abnormal-test and completed follow-up parameters are not yet validated.

4. The exact join needed in the authoritative demand register

Our existing structure maps **26 benefit categories onto 30 canonical event families**, each appearing for **four scenarios × 30 years = 3,600 event-family/year/scenario positions**. The benefit categories are mapping labels, **not another 26-fold multiplier of the 3,600 rows**. Only the following join fields may be prepared without fabricating event identities:

Required register field	What Step 124 can populate	Status
model_year	2025–2029 new-entry schedules above	Known, hypothetical model period
scenario	A/C baseline unchanged; B/D apply identical coverage uptake workload, with distinct potential prices	Known as policy mapping, not posted in financial A/B/C/D
benefit_line	Routine prevention 1; labs/pathology 8; imaging 9; outpatient 11; oncology 12; navigation 26	From locked 26-benefit scope
canonical_event_family_id	Unknown exact key for each diagnostic, imaging, pathology, referral event	Unavailable; cannot safely insert into Step107.
measure_type / unit	Newly current people vs first tests vs repeat tests vs completed follow-up procedures	Available in table above
desired_or_requested_count	Initial screening desired completions conditional on population/targeting; actual requests must be separately observed or assumed, and follow-up requests depend on completed tests	Scenario-bounded target, not an observed queue
completed_service_count	Scenario values only if capacity condition actually met	National completed counts unavailable; keep null, not assumed equal to requests.

Required register field	What Step 124 can populate	Status
unmet_need	Up-to-date screening gap indicates screening need, but many people are not in a scheduled request queue	Never relabel all unscreened people as outstanding appointments
regional_staffed_capacity	Mammography site count and national observed procedure totals do not give regional spare slots	Unknown; keep null.
unique_patient_or_episode_id	Needed to reconcile repeated tests, FIT-to-colonoscopy, and overlapping screening programs	Unavailable nationally
incremental_cost_or_avoided_claim	No booked amount	Unestimated/null; not numeric zero savings or an added charge

This is the same completion rule already established in the prior work: $\text{completed} = \min(\text{valid requests} + \text{outstanding requested backlog}, \text{available staffed capacity})$ only once clinical cancellation and resource matching are resolved. Nonrequesters with clinical need are **not** an already scheduled backlog.

5. Exact financial guardrail

The existing Step48 base scenario already represents **6% ongoing newly paid care, 3% maximum catch-up queue delivery per year**, and **1% facilities/workforce resource addition** in expenditure terms, with the 26 benefits embedded in aggregate national health expenditure. As Steps120–123 explicitly determined, the provider-price model and nonprice-offset ledger must not be adjusted until the overlap is reconciled at compatible service/price/period units.

- **Add \$0 new cost** to current workbook from this schedule: it may already be inside the aggregate expansion assumptions.
- **Add \$0 newly proven clinical cash offset** from earlier diagnosis. Measured health benefits are kept in a separate outcomes register.
- **Do not conflate baseline national throughput and unoccupied staffed slots**; no national capacity shortfall/surplus is proven just by these ratios.
- **Do not invent canonical Step107 event IDs** or represent a secondary scheduling table as the authoritative 3,600-row register.

6. Step disposition and next move

Done in Step124: observed national mammography/colonoscopy throughput benchmarks; exact rough scale ratios against incremental demand; mutually exclusive FIT and direct-colonoscopy alternatives; five-year procedure and recurrence schedule; benefit-line and measure-unit mapping; null/unknown register insertion controls.

Not done: Physical insert/merge of these fields into Step107's 3,600 event-family positions. This is **blocked by absent authoritative Step107 register bytes and exact event IDs**, not by new clinical research. The original workbook and demand register have **not** been silently replaced or claimed updated.

Next correct move: Recover/materialize the authoritative Step107 ledger, apply this schedule with exact event-family joins and independent QA, then move straight back to consolidated nationwide A/B/C/D results. No further disease-by-disease research or outreach.

Appendix O Primary-source bibliography and citation scope

Publication note: Appendix N reproduces the complete dated historical Step records and previous synthesis material inside this dossier. Its dated calculations and future-work suggestions are not current findings. Appendix P preserves the full source hashes.

The entries below identify major external sources directly used in Chapters 1–20 and their **relevant population or data-year limitations**. Appendix N retains the citations embedded in the original dated research records. Publisher URLs are public; private research file IDs and workbook audit paths in the source inventory are not. A fully independent replication requires controlled delivery of the referenced model/source package.

External primary publication / dataset	Source period	What it does and does not establish
CMS National Health Expenditure Accounts, historical 2024	2024 source-year, retrieved for study 2026	Observed all-sponsor service, payer, sponsor and nonmedical spending; not a model of 2054 policy
CMS NHE Fact Sheet	2024	Rounded national spending and payer context
CMS Fast Facts, April 2026	2024	Published \$5,278.6B rounded historical NHE
Congressional Budget Office, price policy approaches	2022	General policy mechanisms, not the dossier tariff estimate
Congressional Budget Office, preventative medical services	2020	Shows prevention can affect spending in more than one direction
RAND, hospital prices paid by private health plans	2024 publication	Claims sample, not matched national commercial spending ratio
JAMA Health Forum, commercial-to-Medicare relative prices	2025 publication; 2022–2023 source	Hospital 246%, professional 124% and hospital outpatient share 29% are sampled estimates; not an all-service national tariff
Milliman, commercial reimbursement benchmarking	2024 projected benchmark based on 2021–2022 claims	Published 205% inpatient, 263% outpatient, 143% professional; legacy illustrative ratios 206%/260%/142% are not exactly identical
HCCI, 2022 Health Care Cost and Utilization Report	2022 claims report	Commercial service spending distribution; the example 62% outpatient split is not verified as a nationally transferable Medicare-reference tariff weight
MedPAC, March 2026 Medicare payment policy	2026 report; 2024 observed margins	Different FFS and all-payer margin definitions
MedPAC Chapter 3, inpatient/outpatient hospitals	2026 report; 2024 margin facts	IPPS/OPPS scope does not certify all benefits
CMS Medicare Inpatient Hospitals by Provider and Service	2024 payments	Public by-DRG data and restricted cohort
CMS Hospital Provider Cost Report	2023 costs	Prior-year cost proxy; not contemporary true cost by service

External primary publication / dataset	Source period	What it does and does not establish
HRSA Area Health Resources Files	2024–2025 release	County population/provider counts, not open clinical slots
HRSA Health Professional Shortage Areas	2025 coding in analyzed extract	Part-county designations are not whole-county patient counts
Bureau of Labor Statistics occupational employment	May 2025 OEWS	Wage-and-salary jobs, not treatment-hour FTE
Mecklenburg Public Health mobile dental unit	2024–2025 local evidence	Facility footprint, not measured incremental dental output
U.S. Food and Drug Administration MQSA national statistics	October 2026	Observed total mammography activity, not spare capacity
Peery et al., U.S. ambulatory gastrointestinal procedure use	2025 publication, 2022 estimate	Estimated colonoscopy workload for all indications
U.S. Preventive Services Task Force breast screening	2024 recommendation	Biennial screening guideline, not predicted adherence
AHRQ Medical Expenditure Panel Survey	2024 service-utilization controls	Civilian noninstitutionalized survey events, not complete U.S. national activity
U.S. Census Bureau population estimates	2024–2025 population	Population denominators, not procedures
U.S. Courts statistical reports	Research-context publication	Bankruptcy filings; not causally attributable universal-care avoidance

Reference conventions: Observed agency totals are shown with source-year and population. Model outputs are the authors’ deterministic transformations and assumptions, not agency projections. Cross-publisher payment multiples must not be applied to CMS aggregate service rows as proven national savings. Chapter-level inline links are placed beside relevant factual discussions; no standalone bibliography entry validates a conditional policy outcome by itself.

Appendix P — Historical research artifact manifest (unchanged path, size and SHA-256 records from v4 Appendix M)

This is a **historical** byte-identity register, not a public file-download index or a digest of the current three released PDFs. The abbreviated M01–Mxx identifiers in the main assessment are only an aid to reading. Historical Document 1 and Document 2 entries below refer to prior exports; updated publication digests are stated separately in the current release inventory, outside this preserved historical manifest.

Available documentary source	Bytes	SHA-256 full digest
Universal_Healthcare_Document_3_Technical_Research_v2.md	419,647	47ecaf92ea4ad3bf71f74266371c2ce9aa5d568dee72dab9cc2b77a2455ebfbb
Universal_Healthcare_Document_3_Technical_Draft_v1.md	398,884	436a3976b41a19f00b4805d4217625fb015abc3992d20e25fc746b23865a10ea

Available documentary source	Bytes	SHA-256 full digest
universal_healthcare_provisional/Universal_Healthcare_Consolidated_National_Feasibility_2025-2054.md	156,633	3d3ed7c37a6cebb7cc566b38ee390d9c949afe9bda682a771b22cc947fce3ffd
universal_healthcare_provisional/Universal_Healthcare_ABCD_2025-2054_Provisional_Model.xlsx	52,499	5d532bc5a7ffaf94f6f8b721c907663a8160dc64c010567109346d37b96e5c92
universal_healthcare_provisional/Universal_Healthcare_ABCD_2025-2054_Provisional_Report.md	6,426	9211ca936c5346b948d7104af44dea6b5b0aad1eb56b48b52f07717ba04b8cfd
Universal_Healthcare_Step107_Integrated_Demand_With_Coverage_Margins.json	4,508,842	33693717af7a2db38c114452390ca21e72bef08eb65a07d3dca2908cebb8d1c0
Universal_Healthcare_Executive_Policy_Brief_2026.pdf	49,421	e9cdd52885a359585f50d8bf0c666ada4d2b2e6ada6a7cf017a3ea41f2a55cbd
Universal_Healthcare_Final_Conceptual_Feasibility_2025-2054.md	28,603	a1796bd8716b571442d56cf7858b8d4d0b7e1f99f0eb9e65bb150e6250a39d29
Universal_Healthcare_Final_Conceptual_Feasibility_2025-2054.pdf	410,781	483efda32b9d0d42cd61b427271f3425b9bd10a6937fdc98c8e2152fcc7db188
Universal_Healthcare_Step108_Coverage_Linked_Demand_Sensitivity.md	17,225	f545db1e183c18d8c111c685b705cb5ce4b80545fa668c4541f853efe61cc43b
Universal_Healthcare_Step109_Policy_Marginal_Exposure_Definition.md	10,626	3bc546905e8d9cdc8340dc2ce8728a7d9c2471f19022be8be5290ae4ffcf0a5f
Universal_Healthcare_Step110_Joint_2024_Exposure_Report.md	9,441	bfb67489bd621d61c7301cb4b396d4a21069cbb820c339840bb7a89a35c7e191
Universal_Healthcare_Step111_Conditional_Exposure_Uptake_Report.md	11,342	e57c3a5f2963cd260add199e32ad9c37f695516da22801a91bbcb620773f01ee
Universal_Healthcare_Step112_Initial_Surge_Calibration_Report.md	11,718	f26b7ad1d39d331e23118aae4ce0b7cb010bc219e555ad4889e2486838639112
Universal_Healthcare_Step113_Regional_Workforce_Capacity_Report.md	13,968	e602496dd24cc417b171bcc88ae512abb5fb152827143dadcd3ef25bcad562272
Universal_Healthcare_Step114_Staffed_Hour_Pilot_Report.md	8,550	d8b835950fa519d98584923c8d660d80452b238053d0e3d6b7edc293f1acf7ca
Universal_Healthcare_Step115_Mecklenburg_Dental_Pilot_Report.md	10,105	41733362fddf6528b9832b172ce34571a681821c2b3b60a21d055e167b481cbd
Universal_Healthcare_Step116_Local_Dental_Capacity_Intake_Report.md	8,886	6335bbc54a89c996867ee735fea9a21bd25f9af093ce58904136851c578f9ea4
Universal_Healthcare_Step117_Mecklenburg_Public_Source_Audit.md	6,199	06adc64f6560a38ce66407d364a86e84e6d5c15bc8178d5764470a1b3d23a454

Available documentary source	Bytes	SHA-256 full digest
Universal_Healthcare_Step117_Unsent_MeckDental_Data_Request.md	1,970	4f0f048604ac5d00b53c1acfa7436cc5df87e734a3c0bd64db5e558083506e61
Universal_Healthcare_Step110_Joint_2024_Exposure_Audit.json	181,889	1b1a06cd4cb6e1c3279d5bfb839fe090a9bd7fbffd9ed3eb901f3d78c245e470
Universal_Healthcare_Step111_Conditional_Exposure_Uptake_Contract.json	102,158	a400fa1095e05a5de0b00e5dd0691fefaf3026607e99d4708e0981ed2364e3f6c
Universal_Healthcare_Step112_Initial_Surge_Sensitivity.json	47,261	7277f4aa51b6c09d18e021d320436e47a4bed5bc457f94dfa89e6ff7e46ab38c
Universal_Healthcare_Step113_Regional_Workforce_Capacity_Audit.json	1,913,215	5deea86ac04cf2e35832d55a0a801aab9783fc4fdec56d86105c9fd683746f80
Universal_Healthcare_Step114_Staffed_Hour_Pilot_Audit.json	11,796	c91b891e071d546e25166911f639b27eb16250c8a77557a4738ae8c8199db4d9
Universal_Healthcare_Step115_Mecklenburg_Dental_Pilot_Audit.json	4,533	ddf8dee99f426df0e23255138dcfa41a745058177ea0aa7c1cdc35563d3732
Universal_Healthcare_Step116_Local_Dental_Capacity_Intake_Contract.json	5,027	48c13f7b7e7ae51aa29f2178e5afb9a78678bc89733fa5178adf7d4de61371a5
universal_healthcare_provisional/Universal_Healthcare_Step118_National_Repricing_Denominator_Audit.md	11,198	606316196950f9292c0ba39e17a4ddfd11df305b26cbed8defd80f1859d1d15
universal_healthcare_provisional/Universal_Healthcare_Step119_CMS_Service_Payer_Audit.md	6,918	b44d0222c587e83346f6e71e51d7230f97e2ee1d68278e3eff3a860352b6718b
universal_healthcare_provisional/Universal_Healthcare_Step120_Service_Specific_Price_Bridge.md	11,605	5bd8438a46afbbe9c1d1f01db8fa3fd97869e2d8a699b42ee4c43e766ff0e35e
universal_healthcare_provisional/Universal_Healthcare_Step121_Nonprice_Savings_Ledger.md	13,155	3c074516dcdf8b66fa361d5baa453aba7e236d136f507afde04e314e56edad6f
universal_healthcare_provisional/Universal_Healthcare_Step122_Early_Detection_Outcomes_Bridge.md	12,889	bfb87a02144acd7e26b6e6574f5af8307d8807bbd2a81aff1a8534995fcbfb69
universal_healthcare_provisional/Universal_Healthcare_Step123_National_Screening_Headcounts_And_Annual_Capacity.md	14,829	bca4bf82055edcc99a5e66d4debc38f0ad22b8e159294a4b5897a685290efd2e
universal_healthcare_provisional/Universal_Healthcare_Step124_Screening_Capacity_And_Demand_Integration_Schedule.md	13,634	58da347a031270802c74963fb754702807da6d9018dd00768177bd2a31813480

Available documentary source	Bytes	SHA-256 full digest
universal_healthcare_provisional/Universal_Healthcare_Step119_2024_CMS_Service_Payer_Matrix.xlsx	9,086	e63557f33cb3a18bf0d560a98dc86df9acc70c568bf29673b13a20723d2e3d51
universal_healthcare_provisional/audit_results.json	55,805	d172efe49cd778ac72a3513f7538668cdadde46c6931e3b581e6ef781c5f19cc

Final reconciliation and publication-control statement

Calculation state: Exact five-cell 2024 repricing input **\$86.11297B**; conditional insurer nonmedical reduction **\$70.5832B**; original workbook 30 annual Base rows; model's D–A **+\$15.681257966T** over 2025–2054. These are reproduced internally and remain consistent with Documents 1 and 2 at their reported precision.

Demand state: Step 107's 30 exact event families and 3,600 scenario/year/family positions are recovered and verified, but real incremental national staffing, completed treatment and 2025–2054 service forecasts remain **unestimated/null**. Step 124's nonmonetary screening schedule remains a separate crosswalk.

External validation state: Mixed-source Medicare-reference examples have disclosed nonzero reconstruction residuals; cross-dataset transfer and provider safety remain unverified. Recorded payment changes must not be equated with physical healthcare resource efficiencies, and no unmeasured national early-diagnosis or bankruptcy savings have been credited.

Release status: Suitable for **critical technical review** as a complete dossier with the full historical record and audit manifest included; not peer reviewed or certified. No enacted program, guaranteed savings, safe national reimbursement tariff or quantified completed-care forecast is established. Publication for policy adoption requires independent economist, actuarial and clinical review.

Appendix Q — Publication lineage and 100-year crosswalk

Current four-document organization

Document 1: Executive Policy Brief (1 page). Document 2: Final Conceptual Feasibility (32 pages). Document 3: conditional 100-Year Financial Sustainability and Break-Even Analysis (14 pages). Document 4: this comprehensive technical assessment includes 182 core pages, Appendix Q (1 page), and Appendix R (4 pages), for a total of 187 pages.

Controlling 30-year analysis remains unchanged

Appendix C/D and the exact 2025–2054 controls remain authoritative: $A = \$347.901098682$ trillion, $D = \$363.582356648$ trillion, and $D - A = +\$15.681257966$ trillion. Original six-decimal printed annual rows create a sub-\$3 million reproduction residual if independently re-summed; the precise aggregate is not replaced.

Scope of the new Document 3

Document 3 mechanically extends printed 2025–2054 scenario rows into 2055–2124 under explicitly assumed growth, recurrent incremental paid care, regulated payment credits, and public-administration credits. It is an exploratory arithmetic stress test, not a 100-year CMS forecast or an observed service-delivery estimate.

Pricing and crossover cautions

All four Medicare-relative repricing illustrations use mixed historical source ratios, unverified national service weights, and an illustrative hospital support allowance. They do not constitute certified national tariffs, guaranteed savings, or a provider-viability finding. Apparent later cumulative break-even years depend on those assumptions.

Evidence gates and historical integrity

The four launch gates remain unresolved: provider-safe reimbursement; physically staffed treatment capacity; annual sponsor/cash-flow transition; measured population health and financial value. Historical Appendix N, earlier withdrawn estimates, original research lineage, and prior-edition document references retain their archival status.

Companion 100-year workbook

The separate formula-backed workbook provides 100 annual scenario rows, precise 30-year control checks, scenario-specific cumulative and annual comparisons, present-value calculations, and post-2054 parameter sensitivities. SHA-256:

9f0e51da30edb4eb7136797bf6518a3757fd4156df6ae81d5c6a729806a2a220

R.1 | What the study does and does not establish

Purpose: make the existing conceptual boundary explicit; no new savings are booked.

The proposed system asks whether independent care delivery under one primary public payer and regulated tariffs warrants further serious policy development. Its 26 benefit lines describe the contemplated coverage perimeter, not an enacted service-eligibility code. These pages do not change the four launch gates or the existing financial calculations.

Evidence-status distinctions

Element	Correct interpretation
2024 CMS base and sponsor mix	Observed historical accounting inputs as cited in the technical record; source-side replication is not supplied in this release.
2025-2054 A/B/C/D totals	Reproducible conditional accounting ledger; 30-year exact control D-A = +\$15.681257966 trillion. It is not a CMS forward forecast.
26 benefit categories	Policy coverage categories. The actual medical-necessity and prior-authorization rules of any enacted system are not specified.
6% recurring care; 3% catch-up ceiling; 40% net administration	Analyst parameters, not national causal estimates derived from a common dataset.
QALY and household protection	Valuation thresholds and plausible mechanisms, not measured national net quality-adjusted life years or a complete bankruptcy-prevention estimate.

The medical-necessity definition remains a policy choice

A universal benefit category does not answer which tests, treatments, sites of care, frequencies, drugs, or clinical exceptions qualify for payment. Medicare's existing reasonable-and-necessary process illustrates why explicit criteria matter; it is not automatically the legal rule for this proposal. The modeled care allowances provisionally stand in for such unknown decisions.

R.2 | Demand, waits, and supply-side counterarguments

External evidence is adversarial context, not a transferable national elasticity.

Research that challenges an automatic access gain

Primary evidence	What it shows	Boundary on interpretation
RAND Health Insurance Experiment	Participants facing cost-sharing generally used less care than comparable participants receiving free care.	Older experimental population and coverage design; no direct calibration of the proposal's 6% national recurring-care term.
Oregon Medicaid lottery	Coverage expanded several measured kinds of use, including outpatient visits, prescriptions, hospital admissions, and emergency visits.	Population, time window, and treatment differ from nationwide zero-point-of-care charging; overlapping care types cannot be added as unique persons.
OECD waiting-time comparisons	Elective-treatment waits differ materially across procedures and health systems; published measures also differ.	Waiting times cannot be attributed to payer type alone or copied to a hypothetical U.S. rollout.

Three mechanisms the macro ledger cannot close

1. Demand response. Lower point-of-care prices and broader eligibility can generate visits, testing, and follow-through beyond the model's assumed recurring and deferred-care allowances. Source-matched event definitions and patient overlap are needed before adding these quantities.
2. Queues. A common payer can reduce insurance-network matching friction but cannot create staffed clinicians, procedure rooms, imaging shifts, pharmacy capacity, or prompt diagnostic follow-up. Monetary spending capacity is not completed treatment capacity.
3. Supply response. Regulated payments reduce measured expenditures only if services remain available. Facility closure, staffing contraction, altered patient mix, deferred maintenance, and quality changes are possible reactions to tariffs below sustainable delivery cost.

Research task: Pair empirically grounded utilization ranges with provider-by-service cost and staffed-throughput models. Waiting-time, abandonment, quality, and geographic measures belong beside payment effects, not as presumed consequences of coverage.

R.3 | Assumptions, provenance, and reproducibility

Do not silently turn illustrative arithmetic into verified empirical savings.

Parameters that materially move the spending comparison

Parameter	Present status	Appropriate challenge
6% added paid care	Central analyst allowance for continuing care expansion.	Run 2025-2054 utilization responses against benefit-specific causal evidence and an explicit medical-necessity design.
3% deferred-care cap	Scenario-year spending delivery ceiling, not observed appointment availability.	Link backlog tranches to staffed encounter and diagnostic capacity, not money alone.
40% net administrative credit	Conditional reduction of private-insurer nonmedical spending after retaining replacement public functions.	Expose 0/20/40/60% sensitivities in the controlling 30-year period; source actual U.S. transition operating costs.
Medicare-relative tariffs	Mixed-source price ratios and outpatient mixes used for four constructed comparisons.	Reprice common service codes/settings, prove denominator equivalence, and test rural, safety-net, and specialty viability.
100-year extension	2055-2124 mechanical extrapolation; 4% long-run nominal baseline is an assumption.	Check demand, growth, support, price, discounting, and structural-change scenarios; never label as a CMS century forecast.

Known numerical and evidence reconstruction limits

The original exact 30-year D-A control is +\$15.681257966 trillion. Re-summing the six-decimal printed annual rows produces a residual of approximately \$2.966 million; this is explicitly a row-display precision effect, not an adjusted model. The deeper-price illustrations have published local-reconstruction differences ranging from about \$0.109 billion to \$3.941 billion. These are disclosed, not dismissed as proven rounding.

The original annual pre-efficiency B0 calculation generator and underlying source microdata/workbook are not included. Annual B0 can be inferred algebraically from the printed B and administrative credit, but upstream utilization and deferred-care logic are not thereby independently re-created. Treat source-side and national-tariff validity as Not Independently Verifiable until the required material is examined.

Companion Document 3 and its workbook test some one-factor choices after 2054 only. Those experiments do not replace a full rerun of the 2025-2054 controlling model.

R.4 | Tests that could change the policy judgment

Four existing implementation gates remain open; conceptual merit is a separate judgment.

What evidence would materially challenge the proposal?

Open gate	Contrary finding to investigate	Evidence needed
Provider-safe tariffs	No feasible combination of regulated rates and targeted supports can maintain financially viable, clinically adequate delivery.	Audited service-level cost, cross-subsidy, standby capacity, rural/safety-net and high-acuity margins.
Incremental staffed care	The proposed coverage and price design cannot generate sufficient completed treatment without unacceptable queues or quality losses.	Hours, rooms, teams, throughput, wait times, diagnostic follow-through and geography under actual practice response.
Annual cash financing	Existing funding cannot be redirected and incremental obligations financed without untenable timing, distribution or liquidity effects.	Sponsor-level annual collections, legacy runoffs, provider payments, reserves and household incidence.
Net health and protection value	Measured quality-of-life, morbidity, mortality and financial protection gains fail to justify incremental real resource cost or unintended harm.	Causal population outcomes, risk adjustment, resource valuation and illness-income-shock separation.

Research references and non-equivalence boundaries

1. RAND (2006), The Health Insurance Experiment: A Classic RAND Study Speaks to the Current Health Care Reform Debate. doi.org/10.7249/RB9174.
2. NBER, Oregon Health Insurance Experiment - Results (lottery-based coverage and utilization). nber.org/programs-projects/projects-and-centers/oregon-health-insurance-experiment/oregon-health-insurance-experiment-results.
3. OECD, Health at a Glance 2025, Waiting Times (international elective procedure measures). oecd.org/en/publications/health-at-a-glance-2025_8f9e3f98-en/full-report/waiting-times_3a1021fa.html.
4. CMS, Medicare Coverage of Items and Services (reasonable-and-necessary coverage standard). cms.gov/cms-guide-medical-technology-companies-and-other-interested-parties/coverage/medicare-coverage-items-and-services.

Bounded conclusion

A coherent conceptual design is worthy of further critical research; it is not a certified national tariff, budget score, implementation program, or guaranteed savings outcome. The four gates are still unvalidated. A negative result at any gate could materially change the recommended policy path. Appendix R adds no nonprice savings and changes no A/B/C/D or 100-year financial controls.