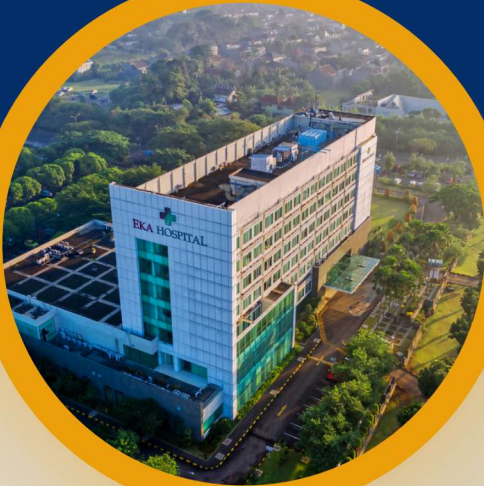


PRIMARY CARE

2026 AND BEYOND



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The Structural Evolution and Future Trajectory of Primary Care in the United States: A Comprehensive Analysis of Workforce, Delivery Models, and Technological Integration

The primary care infrastructure in the United States is undergoing a period of profound destabilization and simultaneous transformation. As the nation navigates the complexities of the 2024–2025 biennium, the sector is characterized by a "vicious cycle" of chronic underinvestment, workforce attrition, and shifting delivery paradigms.¹ Primary care is the only segment of the healthcare system where an increased supply of providers is consistently associated with better population health outcomes and lower overall mortality.² However, the economic and structural frameworks currently in place have marginalized this essential service, leading to a state of neglect that threatens the viability of the broader healthcare ecosystem.¹

The Contemporary Landscape of Workforce Scarcity and Maldistribution

The shortage of primary care physicians (PCPs) is no longer a future projection but a current operational reality. By mid-2024, nearly 75 million Americans lived in designated primary care Health Professional Shortage Areas (HPSAs), representing approximately 22% of the population.³ This scarcity is driven by a confluence of an aging population, a wave of clinician retirements, and a decline in the percentage of medical graduates choosing primary care careers.³

Workforce Projections and Supply-Demand Disparities

The Health Resources and Services Administration (HRSA) and the Association of American Medical Colleges (AAMC) provide convergent data regarding the widening gap between the supply of primary care clinicians and the burgeoning demand. By 2037, the national shortage of full-time equivalent (FTE) primary care physicians is projected to reach 87,150.⁴ This shortage is part of a broader deficit of up to 187,130 physicians across all specialties.³

Specialty Category	2037 Projected Adequacy	Projected FTE Shortage
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Family Medicine	73%	High
Internal Medicine (General)	76%	High
Geriatrics	78%	Moderate
Pediatrics (General)	81%	Moderate
Total Primary Care Physicians	76%	87,150
Total Physician Workforce	N/A	187,130

The adequacy levels indicate that the supply of family medicine physicians will meet only 73% of the projected demand by 2037, a figure that is particularly alarming given the foundational role these clinicians play in rural and underserved communities.⁴ The demographic shift is a primary driver; the U.S. population is expected to grow by 10.6% by 2034, with a 42.4% increase in the population aged 65 and older.⁶ This older demographic requires significantly more intensive primary care management, yet the workforce itself is aging, with more than 40% of active physicians expected to be 65 or older by 2031.⁶

Geographic Maldistribution and Access Barriers

National statistics frequently mask severe regional disparities. The distribution of primary care providers is highly uneven, creating "primary care deserts" in some states while others maintain relative surpluses.⁵ As of 2023, the District of Columbia possessed 255 direct patient care PCPs per 100,000 residents, whereas states like Utah and Mississippi struggled with fewer than 70 per 100,000.⁷

State/Territory	PCPs per 100,000 Population (2023)	Workforce Density Status
District of Columbia	255	High Density
Vermont	139	High Density
Massachusetts	137	High Density

Maine	125	High Density
National Average	86	Baseline
Mississippi	69	Low Density
Utah	67	Low Density

In 2022, 7.8% of U.S. counties had no primary care physician at all.⁴ These shortages have translated into significantly longer wait times for patients. The average wait time for a new patient appointment in 15 major cities rose to 26 days in 2022, a 24% increase from 2004 levels.⁴ In some family medicine practices, the average wait time has reached 20.6 days, a delay that often forces patients to seek care in more expensive emergency departments for non-emergent conditions.⁸

The Evolving Role of Advanced Practice Providers

The primary care landscape is increasingly defined by the expansion of the nurse practitioner (NP) and physician assistant (PA) workforces. Between 2019 and 2023, the number of NPs grew by 35.5%, while the number of primary care physicians remained relatively stagnant.³ By 2037, the supply of NPs is projected to see a surplus of 66,360 FTEs, while physicians face severe deficits.⁴

However, there is evidence of "specialty siphoning" among advanced practice providers. The percentage of NPs working in primary care dropped from 34% in 2021 to 30% in 2022.¹ Similarly, the percentage of PAs in primary care fell from 29.7% to 24.3% in the same period.¹ This trend suggests that the same economic pressures and burnout factors driving physicians away from primary care are affecting the entire clinical team. Research indicates that when NPs are allowed full practice authority, they significantly improve access to care, with states allowing independent practice showing 19.2% lower odds of patients facing a greater than 30-minute drive to a provider.⁹

Economic Drivers of Systemic Decline

The central challenge facing primary care is an economic structure that historically undervalues cognitive, longitudinal care in favor of episodic, procedural interventions. Primary care spending across all payers remained under 5% in 2022, with Medicare and Medicaid spending falling to 3.4% and 4.3%, respectively.¹

Reimbursement Disparities and the Fee-for-Service Model

The traditional fee-for-service (FFS) model rewards volume and procedural complexity, which inherently disadvantages the time-intensive management required in primary care. In 2022, the average reimbursement for a primary care physician visit was \$259, compared to \$1,092 for a specialist visit in gastroenterology.¹ This disparity directly influences medical student residency choices; primary care specialties like pediatrics and family medicine remain among the lowest-paid fields, while surgical specialists often earn more than twice as much.⁴

Clinical Specialty	Average Annual Compensation (2023)
Orthopedic Surgery	\$558,000
Internal Medicine (Primary Care)	\$282,000
Family Medicine	\$272,000
Pediatrics	\$260,000

Furthermore, the physician fee schedule is governed by budget neutrality requirements, making it difficult to increase primary care valuation without cutting other services.¹⁰ Inflation, which surged 12.4% between 2021 and 2023, has significantly outpaced Medicare's reimbursement growth, leading to shrinking margins for practices.¹¹ Labor expenses for hospitals and clinics rose by over \$42.5 billion in that same period, further straining the financial viability of independent primary care practices.¹¹

Federal Research Investment and Primary Care Science

The underinvestment in primary care extends to the research domain. Federal research funding specifically for primary care was only 0.34% of the total federal healthcare research budget in 2023.¹ This lack of funding inhibits the development of evidence-based models for care delivery, population health management, and the integration of social determinants of health into clinical practice.¹

The Psychological Burden: Burnout and Workforce Retention

Burnout in the primary care workforce has reached a level of clinical urgency. Although 2024 data suggests a slight decline from post-pandemic peaks, the rates remain critically high. In 2023, 49% of physicians reported burnout and 20% reported depression.³

Drivers of Professional Exhaustion

Clinician burnout in primary care is primarily attributed to high workloads, excessive administrative burdens, and the moral injury of being unable to meet patient needs within a fragmented system.⁴ The transition to electronic health records (EHRs) has increased the time spent on clinical documentation, often leading to "pajama time," where clinicians spend hours charting after their workday ends.¹³

Specialty	Reported Burnout Rate (2023)
Family Medicine	51%
Pediatrics	51%
Internal Medicine	50%
Overall Physician Average	49%

The impact on career longevity is profound. Only 57.1% of physicians in 2022 stated they would become a physician again if given the choice, a sharp decline from 72.2% in 2020.³ Additionally, 41% of nurses and nearly 29% of the general healthcare workforce indicated an intention to leave their current positions within two years.³

Alternative Delivery Models and the Rise of "Retailization"

The failures of the traditional model have catalyzed the growth of alternative delivery frameworks, ranging from high-touch subscription models to tech-driven retail clinics. These models seek to bypass the administrative and financial constraints of the FFS system.

Direct Primary Care and Concierge Medicine

Direct Primary Care (DPC) and concierge medicine have experienced rapid growth as physicians seek autonomy and patients seek better access. DPC operates on a membership-based subscription model, typically ranging from \$55 to \$150 per month, and generally does not accept insurance.¹⁵

Feature	Direct Primary Care (DPC)	Traditional Primary Care
Panel Size	200 - 600 Patients	2,000 - 3,000 Patients

Appointment Length	30 - 60 Minutes	10 - 15 Minutes
Billing Structure	Monthly Subscription	Fee-for-Service (FFS)
Insurance Use	No (Patients need HDHP for ER)	Yes (Primary Payment)
Access	Same/Next Day	Days/Weeks

The DPC model allows for smaller patient panels, resulting in 40% fewer emergency room visits and 25% lower hospital admissions, as providers have more time for proactive chronic disease management.¹⁷ However, there is concern that if the DPC model continues to siphon off physicians, it will leave fewer PCPs available for the general population, potentially exacerbating the shortage for those who cannot afford membership fees.¹⁶

Retail Health and Corporate Integration

Corporate giants like Amazon and CVS Health have significantly expanded their footprints in primary care through multi-billion dollar acquisitions.

- **Amazon One Medical:** By acquiring One Medical for \$3.9 billion, Amazon has integrated 24/7 virtual care with over 200 physical locations.¹⁹ Amazon is leveraging its Prime membership base (estimated at 167 million in the U.S.) to offer lower-priced health memberships and same-day pharmacy delivery.¹⁹ In late 2025, Amazon introduced unstaffed pharmacy kiosks at One Medical locations, using virtual pharmacists to reduce overhead while increasing prescription fulfillment rates.²⁰
- **CVS Health and Oak Street Health:** CVS's acquisition of Oak Street Health for \$10.6 billion focuses on the high-cost Medicare Advantage population.² Oak Street uses a value-based care model with small panels (500 patients) and integrated social care to keep seniors out of the hospital.²
- **Walgreens and VillageMD:** Walgreens' experience highlights the difficulties of retail primary care. After investing \$6 billion, Walgreens announced plans to divest its majority stake in VillageMD in 2025, having closed over 150 clinics in 2024 due to high impairment charges and operational challenges.²⁰

The "retailization" trend seeks to address the one-third of consumers who lack a primary care doctor by offering convenient, consumer-centric access.¹⁹ However, the retreat of players like Walmart and the struggles of Walgreens suggest that primary care profitability remains a significant barrier for corporations.²³

Technological Innovation: AI and Digital Enablement

Artificial Intelligence is emerging as a critical tool for mitigating workforce shortages and administrative burnout. By 2025, AI-powered tools are being integrated into the primary care workflow to automate documentation, support clinical decision-making, and predict health risks.

Ambient Listening and AI Scribing

Ambient AI scribes use natural language processing to transcribe patient-physician conversations and automatically generate clinical notes.¹³ These tools are estimated to reduce documentation time by as much as 75%, potentially saving a physician an average of one hour per day.¹³

AI Scribe Tool	Best For	Operational Focus
Nuance DAX Copilot	Large Health Systems	Deep Epic/Cerner integration; Cloud-based.
Freed	Small/Mid-sized Clinics	Purpose-built for 2-50 clinician practices.
Suki	Ambulatory Care	Voice commands for orders and referrals.
Abridge	Enterprise Systems	High-fidelity summaries with QA reviewer.
Nabla Copilot	Outpatient/Telehealth	Lightweight, fast setup, scalable.

Clinicians who use ambient scribes report improved eye contact and engagement with patients, as they are no longer required to look at a computer screen during the visit.¹³ Patient surveys indicate that 81% feel their provider spent less time looking at a screen when AI scribing was utilized.¹³

Remote Monitoring and Predictive Analytics

The transition toward value-based care is increasingly supported by technology-enabled monitoring. In late 2025, CMS announced the ACCESS Model, a 10-year pilot program designed to expand the use of wearable devices and telehealth for managing chronic

conditions like hypertension and diabetes.¹⁰ This model aligns payments with outcomes rather than visit frequency, allowing providers to proactively manage high-risk patients through digital health software and FDA-authorized monitoring devices.²⁵

Precision Medicine and Pharmacogenomics in Primary Care

Precision medicine is no longer confined to academic centers and is becoming an integral part of routine clinical care in 2025. This shift is driven by plummeting sequencing costs and the integration of genomic data into clinical decision-making platforms.

Clinical Impact of Pharmacogenomics (PGx)

Pharmacogenomics allows primary care clinicians to tailor medication choices based on a patient’s unique genetic profile. In primary care, more than 60% of patients are prescribed at least one medication with a known pharmacogenetic impact.²⁶ PGx testing can reduce adverse drug reactions by up to 30%, a significant benefit given that nearly one in three prescriptions in the U.S. is never filled or taken as prescribed.²⁰

Therapeutic Area	Biomarker	Associated Drugs
Psychiatry	CYP2D6, CYP2C19	SSRIs, Antipsychotics
Cardiology	CYP2C19	Clopidogrel
Infectious Disease	HLA-B*57:01	Abacavir
Rheumatology	HLA-B*58:01	Allopurinol
Neurology	ApoE ε4	Lecanemab, Donanemab

Preemptive PGx testing is becoming a standard recommendation for certain medications. For example, testing for the HLA-B*58:01 allele is recommended before prescribing allopurinol to avoid severe hypersensitivity reactions.²⁷ Similarly, PGx helps optimize dosages for SSRIs, where remission rates often vary from 30% to 45% using traditional trial-and-error methods.²⁸

Genomic Infrastructure and Challenges

The future of precision medicine in primary care depends on the seamless integration of genomic data into EHRs. Advanced analytics, including deep learning and multi-omic

integration, allow for a "360-degree view" of a patient's biological profile.²⁹ However, significant barriers remain, including high upfront costs, inconsistent reimbursement policies, and a need for greater genomic literacy among primary care professionals.³¹

Success Metrics of Integrated Team-Based Models

The transition from physician-centered care to interprofessional team-based care is widely viewed as the most effective strategy for managing the growing complexity of patient needs while reducing clinician burnout.³³

The VA Model: A Benchmark for Success

The Veterans Health Administration (VA) operates the nation's largest integrated primary care system, utilizing Patient-Aligned Care Teams (PACTs) and Home-Based Primary Care (HBPC).

- **Hospitalization and Cost:** VA HBPC has been demonstrated to reduce hospitalizations for ambulatory care-sensitive conditions (ACSCs) by 27%.³⁵ Enrollees experienced a 25% decrease in all hospitalizations and an 11% reduction in total healthcare costs.³⁶
- **Team Dynamics:** PACTs incorporate nurses, pharmacists, and social workers to coordinate care, leading to higher patient satisfaction and lower levels of staff burnout.³⁶

Outcomes in Private Sector Value-Based Models

Integrated models like those practiced at Oak Street Health and Intermountain Healthcare have shown similar clinical benefits. Oak Street's value-based model, which serves seniors through interdisciplinary teams, has been shown to reduce acute hospitalizations by 20% compared to traditional Medicare Advantage plans.² By using risk stratification tools, Oak Street can project 30% of acute events for its highest-risk patients, allowing for timely preventative interventions.²

Team Configuration	Evidence-Based Outcome
Two up-skilled MAs per clinician	Increased visit capacity; reduced clinician burnout.
RN Chronic Care Managers	Reduced hospital admissions for high-risk patients.
Clinical Pharmacists	Improved diabetes and hypertension control.
Integrated Behavioral Health	Reduced burnout; improved

	depression/anxiety outcomes.
Community Health Workers	Net cost savings through management of social needs.

Federal and State Policy Frameworks

The sustainability of primary care is increasingly dependent on legislative reform at both the federal and state levels. The goal of these policies is to shift the financial incentive structure away from FFS and toward value-based, hybrid payment models.

Federal Legislative Reform: The Pay PCPs Act (2024)

Introduced in the Senate in May 2024, the Pay PCPs Act (S.4338) represents a major effort to reform primary care payment within Medicare.³⁹

- **Hybrid Payment Structure:** The Act authorizes HHS to establish hybrid payments consisting of prospective per-member-per-month (PMPM) payments and traditional FFS.³⁹ The PMPM component is designed to cover 40-70% of expected charges, providing practices with stable revenue to invest in care coordination and technology.³⁹
- **Administrative Reform:** It establishes a Technical Advisory Committee within CMS to ensure that Relative Value Units (RVUs) accurately reflect the cognitive work of primary care.³⁹
- **Patient Access:** The bill allows for a 50% reduction in beneficiary cost-sharing for primary care services if the patient designates a specific provider as their usual source of care.³⁹

The One Big Beautiful Bill Act (OBBBA) and Future Fiscal Policy

Enacted in 2025, the OBBBA is a comprehensive legislative package that significantly impacts healthcare funding. While not solely focused on primary care, its adjustments to Medicaid and marketplace subsidies will fundamentally change the payer mix for many practices.⁴¹ Estimates suggest that up to 10 million individuals could lose coverage by 2034 due to these adjustments, requiring primary care systems to strategically realign their financial profiles to remain sustainable.⁴¹

State-Level Policy Priorities

States are actively working to rebalance health spending and attract primary care clinicians through targeted policy menus.

- **Spending Targets:** California has set a legislative goal to increase primary care investment to 15% of total medical spending by 2034.⁴² Oregon and Rhode Island have

also enforced spending targets across all payers.⁴²

- **Medicaid Reimbursement:** New Mexico raised its Medicaid reimbursement rates for primary care to 150% of Medicare benchmarks in 2025.⁴²
- **Behavioral Health Integration:** Two-thirds of states now provide Medicaid coverage for the Collaborative Care Model (CoCM), facilitating the integration of mental health into primary care settings.⁴²

Future Projections and Systemic Transition: 2026–2030

The period between 2026 and 2030 is projected to be a period of "steady, phased changes" toward an accountable care environment.¹⁰ CMS has set a goal of transitioning 100% of Medicare beneficiaries to value-based arrangements by 2030.³⁸

CMMI Model Evolution

The Center for Medicare and Medicaid Innovation (CMMI) is refining its portfolio by sunsetting smaller, less scalable models in favor of full-risk architectures.

- **LEAD Model:** Set to launch in late 2026, the Long-term Enhanced ACO Design (LEAD) Model will focus on high-need beneficiaries, including dual eligibles and the homebound.¹⁰
- **ACO REACH Updates:** In 2026, CMS will implement new policies to cap risk score growth and increase the weight of the V28 HCC model to 100%, aiming for greater model sustainability.⁴³
- **MAHA ELEVATE:** A three-year pilot model starting in 2026 will test lifestyle-focused interventions currently not covered by standard Medicare.¹⁰

Long-Term Workforce and Access Outlook

By 2030, the ratio of workers per senior is expected to fall from four to 2.9, placing unprecedented strain on the healthcare system.¹¹ Primary care will increasingly migrate outside of traditional hospital walls, with outpatient and home-based services projected to see volume increases of 14% to 22% through 2034.¹¹ The success of this transition will depend on the successful deployment of AI-supported care models and the continued expansion of integrated teams.

Analysis and Synthesis of Future-State Implications

The data suggests that the "current state" of primary care is one of managed crisis, while the "future state" depends on a radical realignment of values and economic structures.

The Sustainability of the Physician-Centric Model

The analysis indicates that the traditional physician-centered, FFS model is functionally obsolete for managing a multi-morbid, aging population. The projected shortage of nearly 90,000 PCPs by 2037 makes it physically impossible to maintain the current "15-minute visit" paradigm.⁴ The transition to team-based care is not merely an option but a structural necessity.

The Role of Technology as a Force Multiplier

Technology, particularly AI and remote monitoring, serves as a critical force multiplier for a shrinking workforce. If AI can automate nearly 30% of clinical work hours by 2030, it effectively "expands" the available workforce without requiring more clinicians.¹¹ However, this technology must be implemented in a way that restores the human connection of medicine rather than further distancing the provider from the patient.

The Geopolitical and Economic Context of Reform

The high interest rates and inflation of the 2023–2025 period have made hospital-based investment in primary care more difficult.¹¹ This economic environment may favor retail giants like Amazon, who have the capital to invest in tech-driven primary care, potentially leading to a more bifurcated healthcare system where "convenience-based" care is provided by corporations and "complex-care" management is left to traditional, albeit strained, health systems.

Nuanced Conclusions and Strategic Outlook

The primary care landscape in the United States is at an inflection point. The evidence indicates that while the workforce is under severe strain and the financial model is broken, the technological and policy tools for a successful transformation are becoming available.

1. **Payment Reform is the Prerequisite:** Technological integration and team-based care cannot be sustained under an FFS model. The adoption of hybrid and capitated payments, as proposed in the Pay PCPs Act, is the essential prerequisite for system stability.³⁹
2. **Access Disparity is a Critical Risk:** The rise of DPC and high-touch corporate models risks worsening health inequities if they are not paired with robust Medicaid reform and community health center support.¹⁸
3. **Human-Centered Technology:** The primary value of AI in primary care is its ability to eliminate administrative "sludge," allowing clinicians to focus on the healing relationship that is the core of high-quality care.¹⁴

The path toward 2037 requires a deliberate, multi-sector approach that elevates primary care from its current role as a low-margin gatekeeper to its necessary role as the strategic heart of

the American healthcare system. The findings suggest that a small absolute increase in primary care spending, if redistributed from the high-cost specialty and acute care sectors, would have a disproportionately high positive effect on the stabilization and sustainability of the entire system.¹²

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