Primary care, reimagined: Workforce and care model innovation in a modern age

Appendix

Disclaimer

These materials reflect general insights based on currently available data and modeling assumptions related to primary care supply and demand. The analyses have not been independently verified and are inherently uncertain. Future outcomes may differ materially from any statements of expectation, forecasts, or projections contained herein.

These materials are not a guarantee of results and should not be relied upon as definitive forecasts. They do not constitute medical, policy, legal, or other regulated advice and do not include all information required to determine a specific course of action. The projections and findings are provided "as is" solely for informational purposes, without any representation or warranty, and all liability is expressly disclaimed.

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Model overview

This appendix serves as a methodological supplement to *Making care primary again: How workforce reform, investment, and new models of care can improve the patient experience*, an interactive from the McKinsey Health Institute in collaboration West Health Institute. The interactive is designed to estimate current and future primary care capacity in the United States, to highlight potential gaps between the demand for primary care visits and the supply of provider capacity, and to model potential scenarios that address the gap.

Demand modeling. The demand section includes two components: selecting condition groups of interest (for example, behavioral health [BH], Alzheimer's disease and other dementias [ADOD], and metabolic health) and calculating total demand. Demand is calculated as the visits from current diagnosed claimants of primary care plus the estimated number of primary care visits required if 90 percent of adults across the condition groups received the same standard of care. This approach accounts for people who are affected but undiagnosed or untreated, thereby capturing the latent demand not visible in claims.

Supply modeling. The supply section includes calculating capacity—as measured through total potential primary care visits—by taking the product of the total actively practicing primary care provider workforce and average provider productivity. The provider workforce includes family medicine physicians, general internal medicine physicians, geriatrics physicians, nurse practitioners (NPs) in primary care, and physician assistants in primary care.

Scenarios. This section includes both demand-side and supply-side scenarios: modeling of demand scenarios such as adoption of GLP-1s, disease modifying therapies (DMTs), integrated care models, and population health improvements and modeling of supply scenarios such as workforce growth and productivity improvement interventions.

The primary care visit gap is calculated as total demand minus supply: A positive value indicates a shortage (demand exceeds supply), and a negative value indicates potential additional capacity at current care standards of about 30-minute visits (supply exceeds demand). Our model also assesses urban and rural demand. However, these models do not account for the many other factors that affect how supply meets demand, such as patient preferences, the rise in concierge primary care, provider distribution, or logistical barriers to access. This means the practical assessment of visits, especially in rural areas, may require additional research.

Demand modeling

A. Selecting condition groups of interest
Methodology
To focus on a set of relevant conditions, condition groups of interest were selected based on which conditions drive a meaningful portion of the demand for primary care for adults in the United States, have a high disease burden, and serve as the main areas where transformational care models are being developed and implemented. After analyzing conditions through these filters, three groups of interest emerged, including the following conditions:

— *BH (80 million people as of 2025)*. Primary care is important for detection of BH conditions, inclusive of all mental disorders and substance use disorders.

— *ADOD (seven million people as of 2025)*. Primary care is key for early detection of ADOD, which makes up 80 percent of neurological disease cases of older adults.

— *Metabolic health (96 million people as of 2025)*. Conditions are included based on high prevalence among older adults, long-term and chronic nature, and relevance to primary care, including obesity, diabetes, hypertension, and heart diseases.

Two final groups were created to capture the entire population: "<20" and "rest of population" (ROP). The <20 group includes all individuals under the age of 20, regardless of conditions. ROP includes all remaining adults that were not accounted for in the three condition groups.

Based on an analysis of claims data, the three main groups listed above make up 70 percent of primary care visits, with individuals in these groups averaging six to seven visits per year—nearly triple the average visits of the ROP group.

B. Calculating demand
Overview
Demand is calculated as the visits of current diagnosed claimants of primary care plus the estimated number of primary care visits required if 90 percent of adults across the condition groups received the same standard of care. This approach accounts for people who are affected but undiagnosed or untreated, thereby capturing the latent demand not visible in claims. Demand was estimated for the three condition groups.

Methodology

1. *Identifying undiagnosed population (Figure 1).* We used Institute for Health Metrics and Evaluation (IHME) data[1] across five-year age bands (20–24 through 90 and older) to identify the prevalence of relevant diagnoses for each condition group. Then, to determine the affected population size, we multiplied prevalence rates by the corresponding share of the US population (Congressional Budget Office [CBO] data).[2] Commercial, Medicare, and Medicaid claimant data was taken from Merative MarketScan (2023) and the Centers for Medicare & Medicaid Services (2024) for the diagnosed claimants. For claimants that belonged in multiple conditions, they were placed mutually exclusively into a condition group based on a hierarchy of ADOD, BH, and metabolic: For example, if a claimant had ADOD and metabolic conditions, they would be placed in the ADOD cohort. To arrive at the undiagnosed population, we then subtracted the number of diagnosed and treated individuals from the total affected group to estimate the undiagnosed and untreated population.[3]

2. *Calculating visit demand (Figure 2).* We multiplied the undiagnosed population by 90 percent, reflecting the assumption that it is unrealistic to identify and treat 100 percent of affected individuals. After identifying the per member per year (PMPY) healthcare utilization of those currently receiving care, the PMPY rates for each condition group were multiplied by the amount of people in that condition group. For each service location, visits and spend for each of the condition groups were divided by the respective number of claimants from that subpopulation (Figures 3 and 4). Adding the demand from the undiagnosed population to the demand from the diagnosed population results in the total demand. State-level demand projections were developed using CBO population data, with the national age distribution applied uniformly across states. Because CBO was used as the single unified data source for population projections, state-specific age forecasts of population for each state were not produced.

3. *Projection methodology.* Demand calculated for the year in which claims data was available required projections to extend expected demand through 2050. This was driven by population growth from CBO through 2050. Spend growth from 2025 to 2033 was based on national health expenditure (NHE) physician and clinical services expenditure projections (5.6 percent CAGR from 2025 to 2033[4]). Between 2033 and 2050, a 1.6 percent CAGR was used for spend growth, based on CBO's GDP growth rate through 2050 because NHE expenditure projections were not available.

4. *Rural and urban demand.* The US Census Bureau's rural score was used for urban–rural classification.[5] Demand for each state was divided into rural and urban components by multiplying the rural population percentage of the state by the overall demand to estimate rural demand—and vice versa for the urban demand.

[1] Institute for Health Metrics and Evaluation. Used with permission. All rights reserved. Accessed November 13, 2025.
[2] Budget and economic data from Congressional Budget Office, accessed November 13, 2025.
[3] Budget and economic data from Congressional Budget Office, accessed November 13, 2025.
[4] Sean P. Keehan et al., "National health expenditure projections, 2024–33: Despite insurance coverage declines, health to grow as share of GDP," *Health Affairs*, June 25, 2025, Volume 44, Number 7.
[5] "Urban and rural," US Census Bureau, accessed November 13, 2025.

FIGURE 1

Identifying the undiagnosed population helps estimate total demand.

Formula for identifying the undiagnosed population

[1]IHME and CBO provide year-over-year data through 2050 (eg, 2025, 2026, etc).
[2]Age cohorts segmented by 5-year bands (eg, 20 to 24 years of age, 25 to 29, etc).
Source: CBO; IHME. Used with permission. All rights reserved

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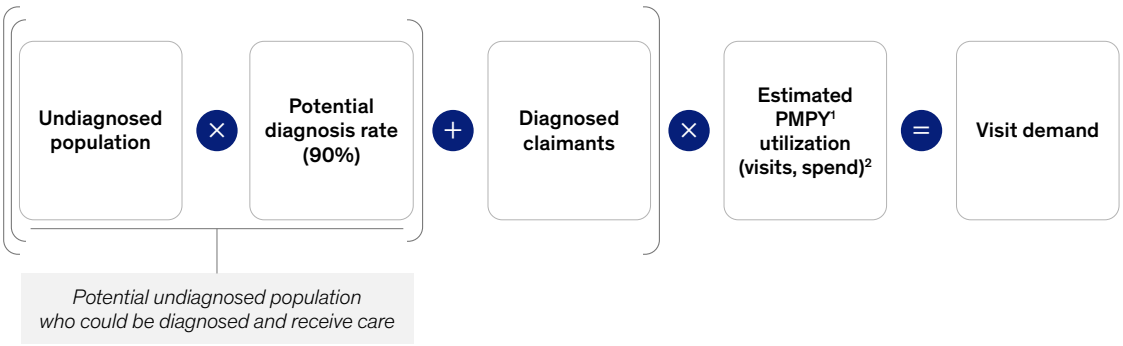
FIGURE 2

Total demand considers undiagnosed and diagnosed populations, diagnosis rate, and estimated per member per year utilization.

Formula for calculating visit demand



[1]Per member per year.
[2]Estimated by averaging the PMPY utilization rates of the diagnosed condition group and the rest-of-population (ROP) group. For example, if patients for Alzheimer's disease and other dementia (ADOD) average 6 visits per year and the ROP group averages 2 visits per year, undiagnosed ADOD individuals are

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FIGURE 3

Per member per year visits for the Alzheimer's and other diseases group are relatively high across service locations.

Visits per member per year by condition group and service location

		Service location								
Condition group[1]	Total	Primary care	Emergency department	Hospital inpatient	Home	Hospice	Nursing home	Specialty office and clinic	Urgent care	Other
Alzheimer's and other diseases	26.1	6.3	0.7	0.7	1.2	0.2	0.8	14.6	0.1	1.6
Behavioral health	26.7	5.8	0.6	0.3	0.5	0	0.1	18.4	0.3	0.5
Metabolic health	24.2	6.7	0.5	0.3	0.7	0	0.1	15.1	0.2	0.5
Rest of population	6.2	1.5	0.1	0	0.1	0	0	4.1	0.1	0.1

[1]The under 20 condition group was excluded from deep dive analyses across service locations.
Source: Centers for Medicare & Medicaid Services, Medicare Advantage data, Medicare Fee-for-Service Parts A and B claims data and Part D prescription drug event data, and Medicaid data obtained via CMS Innovator Research Identifiable Files. Values with less than 11 observations have been suppressed; Merative MarketScan Commercial claims data (2023). Certain data used in this study were supplied by Merative as part of one or more Merative MarketScan Research Databases. Any analysis, interpretation, or conclusion based on these data is solely that of the authors and not Merative

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FIGURE 4

The Alzheimer's and other diseases group sees relatively high per member per year spending across service locations.

Spending per member per year by condition group and service location, $ thousand

		Service location								
Condition group[1]	Total	Primary care	Emergency department	Hospital inpatient	Home	Hospice	Nursing home	Specialty office and clinic	Urgent care	Other
Alzheimer's and other diseases	32.1	1.2	0.9	8.2	3.7	3.1	10.8	3.9	0.0	0.3
Behavioral health	16.0	1.1	0.9	4.4	1.6	0.1	1.8	5.8	0.1	0.1
Metabolic health	16.6	1.4	0.8	5.2	1.4	0.2	1.4	6.1	0.0	0.1
Rest of population	5.4	0.4	0.4	1.2	0.3	0.1	0.2	2.7	0.0	0.1

[1]The <20 (years of age) condition group was excluded from deep dive analyses across service locations.
Source: Centers for Medicare & Medicaid Services, Medicare Advantage data, Medicare Fee-for-Service Parts A and B claims data and Part D prescription drug event data, and Medicaid data obtained via CMS Innovator Research Identifiable Files. Values with less than 11 observations have been suppressed; Merative MarketScan Commercial claims data (2023). Certain data used in this study were supplied by Merative as part of one or more Merative MarketScan Research Databases. Any analysis, interpretation, or conclusion based on these data is solely that of the authors and not Merative

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Supply modeling

A. Calculating supply

Overview

Primary care visit capacity is modeled using two factors: the number of primary care providers and the average number of visits each provider delivers per day. Capacity is calculated by multiplying the provider count by the estimated number of annual visits per provider. Projections draw on workforce data from the Health Resources and Services Administration's (HRSA) Workforce Projections Dashboard, with visits per provider held constant to the 2025 rate. This approach relies on assumptions about both workforce supply and provider productivity, which are detailed below.

Methodology

1. *Primary care workforce size (Figure 5).* The primary care workforce includes five types of primary care providers, according to the HRSA Workforce Projections Dashboard[6]: family medicine physicians, general internal medicine physicians, geriatric physicians, NPs specifically practicing in primary care, and physician assistants specifically practicing in primary care. Annual workforce supply estimates are taken from HRSA's full-time-equivalent (FTE) projections for metro and nonmetro areas from 2022 to 2037. The estimates include both individuals currently working and those actively seeking employment. To reflect scope-of-practice restrictions for NPs, adjustments are applied to their effective FTE contribution. In states with restricted scope of practice, NPs are weighted at 0.75 FTE, consistent with the ratio cited by California's Department of Health Care Access and Information.[7] In states with reduced scope of practice, NPs are weighted at 0.875 FTE.

2. *Primary care workforce productivity.* To estimate the average number of patient visits handled by a full-time primary care provider per year, annual visit estimations were compiled across multiple sources (Figure 6). Estimations of average annual FTE primary care provider visit volume were specific to each provider type (for example, 15 for family medicine physicians).[8]

3. *Projection methodology.* After 2037, workforce projections are estimated by extending the CAGR observed from the 2022–2037 period. However, because CBO projects slower growth in the working-age population after 2037, the projected workforce growth rate is reduced by about 33 percent. This adjustment reflects a 33 percent decline in annual working-age population growth in the 2037–2050 period compared with the 2022–2037 period.[9]

4. *Rural and urban supply*. Provider supply in rural and urban areas was calculated using NPI database records,[10] with each provider linked to their ZIP code and classified as rural or urban based on the US Department of Agriculture's urban–rural definition.[11] Supply for each state was divided into rural and urban components. To estimate the rural supply, the rural practitioner proportion of the state (rural practitioners divided by total practitioners) was multiplied by the overall supply; to estimate the urban supply, the urban practitioner proportion was multiplied by the overall supply.

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6 "Health workforce projections," Department of Health and Human Services, Health Resources and Services Administration, accessed November 13, 2025.
7 "Primary care shortage areas report," California Department of Health Care Access and Information, January 30, 2020.
8 "V. Physician model components," Health Resources and Services Administration, 2025; "Table 6: Average number of family physician patient encounters per week by setting," American Academy of Family Physicians, accessed November 13, 2025; *The state of the nurse practitioner profession 2020*, American Association of Nurse Practitioners, 2021; *Statistical profile of certified PAs by specialty*, National Commission on Certification of Physician Assistants, 2022.
9 Budget and economic data from Congressional Budget Office, accessed November 13, 2025.
10 NPI files from the Centers for Medicare & Medicaid Services, accessed November 13, 2025.
11 "Rural-urban continuum codes," Economic Research Service, updated January 7, 2025.

FIGURE 5

Primary care supply will be modeled by workforce capacity across sites of care.

Formula for calculating workforce capacity

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FIGURE 6

Primary care workforce will be modeled by visits and workforce.

Visits and workforce by primary care workforce

Primary care workforce	Visits		National workforce,[1] thousands			
	Average daily visits	Average annual visits[1]	2025	2030	2040	2050
Family medicine physicians	15	3,900	112	113	117	117
General internal medicine physicians	9	2,400	88	89	92	92
Geriatrics physicians	7	1,700	7	7	7	8
Nurse practitioners (primary care)	13	3,400	76	98	134	152
Physician assistants (primary care)	14	3,500	38	41	45	46

[1]Figures are approximate.
Source: American Academy of Family Physicians; American Association of Nurse Practitioners; Health Resources and Services Administration; Medical Group Management Association; National Commission on Certification of Physician Assistants

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Scenario analysis

The following section covers a series of scenarios that affect the corresponding demand and supply of primary care visits. On the demand side, this section covers medical management for obesity and diabetes (for example, GLP-1s), DMTs for ADOD, primary care behavioral health integration (PCBHI) models, and general population health improvement. All of these scenarios, except for the population health scenario, will serve to potentially increase primary care visits due to a mixture of additional management and monitoring needs; they will also have the potential to substantially decrease the total cost of care. Note that total cost of care in this model includes purely healthcare expenditure in sites of care and does not include pharmaceutical costs. On the supply side, this section will cover workforce growth and primary care provider productivity improvement interventions (with a focus on AI-enabled administrative tools).

A. Demand scenario analysis (Figure 7)

A1: Medical management for obesity and diabetes (for example, GLP-1s)

Overview

The impact of medical management for obesity and diabetes (for example, a prescription for a GLP-1) is modeled using two inputs: the adoption rate among the clinically obese population and efficacy rate (percent reduction in emergency department and inpatient encounters). Both inputs are informed by external research conducted across health systems.

Methodology

Adoption rate. The adoption rate is a subset of the population that can be on GLP-1s, which is the US adult obese population (inclusive of diabetic population that is obese). The CDC reports that 40 percent of the adult population is obese (a BMI of greater than or equal to 30).[12] The minimum adoption rate is set at 11 percent, reflecting current GLP-1 adoption.[13] The theoretical maximum adoption rate is set at 35 percent, reflecting an adoption rate similar to statins.[14]

Efficacy rate. The minimum efficacy rate is 1 percent, and the theoretical maximum is 45 percent, given that GLP-1 adoption could reduce 42 percent of inpatient utilization.[15] The efficacy rate will affect the reduction in PMPY inpatient and emergency visits due to fewer severe incidents (for example, fewer obesity-related acute incidents, such as heart attack or pulmonary embolism), resulting in a lower total cost of care. Baseline PMPY primary care visits will increase by three visits, reflecting need for additional medication management, initial screenings and re-titrations, and ongoing comprehensive assessments. The model assumes that the toggled improvements will be reached over a ten-year period (modeled linearly), reflecting gradual increases in efficacy to reflect steady progress in adoption rather than an immediate shift.

A2: DMTs for mild to moderate ADOD and mild cognitive impairment (MCI)

Overview

Next-generation DMTs could potentially slow disease progression[16] in individuals with mild to moderate ADOD and MCI, reducing reliance on costly institutional care such as residential facilities. The impact of DMTs for mild to moderate ADOD and MCI is modeled using two inputs:

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[12] Samuel D. Emmerich et al., "Obesity and sever obesity prevalence in adults: United States, August 2021–August 2023," National Center for Health Statistics, September 2024.
[13] "Obesity and GLP-1 drugs: A claims-based analysis," FAIR Health, May 27, 2025.
[14] Nancy Schimelpfening, "Statins help cut cardiovascular risk but only 35% of eligible adults use them," Healthline, December 4, 2023.
[15] Wojciech Michalak et al., "Impact of semaglutide 2.4 mg on healthcare resource utilization and medical costs in patient with heart failure in the United States," *Clinical Therapeutics*, October 2025, Volume 47, Number 10.
[16] "Biogen reports first quarter 2024 GAAP EPS growth of 1% and Non-GAAP EPS growth of 8%," Biogen, April 24, 2024.

adoption rate of DMT among the mild to moderate ADOD and MCI population and efficacy rate (percent reduction in total cost of care due to less reliance on institutional care). Both inputs are informed by external research conducted across health systems. These products may also increasingly be administered in primary care rather than principally by neurologists.

Methodology

Adoption rate. The adoption rate minimum is set to 1 percent and is applied to a subset of the population that can be on DMTs (which is the affected MCI population that could potentially progress to ADOD) and people diagnosed with mild and moderate ADOD. The maximum adoption rate is set at 35 percent, reflecting an adoption rate similar to statins.[17] It was projected that in 2025, approximately 14.7 million individuals face MCI[18] (of which 20 percent are expected to progress to ADOD[19]) and 3.3 million people were diagnosed with ADOD (of which 80 percent were diagnosed with mild to moderate ADOD conditions), which translates to about 5.6 million people eligible for DMTs. The model assumes that of this base population, a certain proportion adopts DMTs—and of that, 30 percent are referred to specialty care settings and 70 percent receive DMT in primary care settings.

Efficacy rate. The efficacy rate is the rate at which DMT can halt the progression of ADOD from becoming more severe. Therefore, an increase in efficacy is the percentage of individuals that avoid going from mild to moderate severity or moderate to severe severity. This would lead to avoidance in visits to emergency rooms, inpatient facilities, nursing homes, hospice, and home care. The model assumes 1 percent as the minimum reduction, representing current levels of adherence, and 50 percent as the theoretical maximum achievable with full adherence. PMPY primary care visits will increase by about 1.5 visits, reflecting the need for additional medication management, initial screenings and re-titrations, and ongoing comprehensive assessments. This visit increase is applied to all individuals who adopt DMTs. The model assumes that the toggled productivity improvements will be reached over a five-year period (modeled linearly), reflecting gradual increases in efficacy to reflect steady progress in adoption rather than an immediate shift.

A3: Primary care BH integration models

Overview

The impact of PCBHI models for BH is modeled using one input—adoption rate among untreated population with mild to moderate BH conditions; the efficacy rate remains fixed.

Methodology

Adoption rate. The minimum adoption rate is set at 1 percent, and the theoretical maximum adoption rate is set at 90 percent. The 90 percent reflects an alignment with the Kennedy Forum's goal of 90/90/90 for screening, providing services, and recovery.[20] The potential population that could use integrated BH models are individuals who face mild or moderate BH conditions. According to the Substance Abuse and Mental Health Services Administration, approximately 70 to 75 percent of individuals who have a BH condition face a mild or moderate condition.[21]

Efficacy rate. The efficacy rate will affect the reduction in total PMPY spend due to more coordinated care inpatient visits due to less severe incidents. According to the Bowman Family Foundation, integrated BH approaches such as collaborative care models can reduce overall

[17] Nancy Schimelpfening, "Statins help cut cardiovascular risk but only 35% of eligible adults use them," Healthline, December 4, 2023.
[18] Kumar B. Rajan et al., "Population estimate of people with clinical Alzheimer's disease and mild cognitive impairment in the United States (2020–2060)," *Alzheimer's & Dementia*, December 2021, Volume 17, Number 12.
[19] Rosebud Roberts et al., "Higher risk of progression to dementia in mild cognitive impairment cases who revert to normal," *Neurology*, January 28, 2014, Volume 82, Number 4; Klaus Schmidtke and Sonja Hermeneit, "High rate of conversion to Alzheimer's disease in a cohort of amnestic MCI patients," *International Psychogeriatrics*, February 2007, Volume 20, Issue 1; "Staving off dementia when you have mild cognitive impairment," Harvard Health Publishing, Harvard Medical School, March 30, 2021.
[20] "Alignment for progress goals for 2033: 90-90-90," The Kennedy Forum, accessed November 13, 2025.
[21] *2024 companion infographic report: Results from the 2021 to 2024 National Survey on Drug Use and Health*, Substance Abuse and Mental Health Services Administration, 2025.

spend by 13 percent.[22] Baseline PMPY primary care visits increase by one visit because these new care models are expected to increase coordination between the primary care provider and BH specialists.[23] The model assumes that the toggled productivity improvements will be reached over a two-year period (modeled linearly), reflecting gradual increases in efficacy.

A4: Population health improvement

Overview

The impact of population health improvement is modeled using a single input: average number of primary care visits per US adult per year. Improvements in underlying population health, such as better diet and exercise habits, reduced pollution, and broader preventive health measures, can lower the frequency of primary care visits needed per person.[24] By modeling these improvements, we can estimate how a healthier population would reduce primary care demand over time while also contributing to lower overall healthcare costs.

Methodology

Adoption rate. It is assumed that it applies to 100 percent of the adult US claimant population.

Efficacy rate. According to Merative MarketScan claims data and Centers for Medicare & Medicaid Services 100 percent Medicare Fee-for-Service Parts A and B claims data and Part D prescription drug event data (2024), Americans average roughly 3.85 primary care visits per person per year, as compared with about 3.0 visits in countries such as Norway and Sweden (theoretical minimum).[25] If the United States achieved even one fewer visit per person per year, the resulting

FIGURE 7

Input ranges for demand scenarios consider adoption and efficacy rates.

Adoption and efficacy rates by treatment type

	Metric	Minimum	Theoretical maximum
GLP-1	Adoption rate (among clinically obese population), %	0	35
	Efficacy rate (% reduction in emergency department and inpatient encounters)	0	45
Disease-modifying therapies	Adoption rate (among population with mild cognitive impairment), %	0	35
	Efficacy rate (% reduction in total cost of care due to less reliance on institutional care)	0	50
Primary care behavioral health integration	Adoption rate (among behavioral health population with mild or moderate disorders), %	0	90
Primary care demand reduction	Average number of primary care provider visits per US adult per year	3.0	3.85

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[22] "Mounting evidence that use of the collaborative care model reduced total healthcare costs," Bowman Family Foundation, November 2025.
[23] Christopher Reist et al., "Collaborative mental health care: A narrative review," *Medicine*, December 30, 2022, Volume 101, Number 52.
[24] "Assessing the advantages of preventive care," Harvard Medical School, accessed November 13, 2025.
[25] "Statistikk om Allmennlegetjenesten" [Statistics about general practitioner service], Statistics Norway, May 6, 2025.

efficiency gain could free up provider capacity for about 50 million more people by 2050—more than closing the gap.

B. Supply scenario analysis (Figure 8)

B1: Workforce growth

Overview

A growing primary care workforce is modeled by increasing the number of annual primary care entrants. Additional entrants are added cumulatively to the existing workforce projections from HRSA, which already account for baseline growth in primary care supply. This approach reflects both the underlying trajectory of workforce expansion and the incremental impact of expanding training pipelines, with detailed assumptions provided below.

Methodology

The range of additional entrants is based on a scenario in HRSA workforce projection modeling in which a 20 percent increase in annual primary care graduates (current graduation rate is approximately 4,500 graduates per year[26]) yields about 900 extra entrants. Thus, the user range takes HRSA's estimation as a midpoint, scaling down to a minimum of zero entrants and up to a maximum of about 1,800 entrants. Graduates are allocated across provider types based on the ratio of provider type to total workforce, averaged between the 2025 and 2050 ratios.

B2: Primary care provider productivity improvement interventions

Overview

The impact of productivity improvement interventions is modeled using two inputs: the adoption rate across primary care providers and the realized productivity improvements. Productivity gains are expressed as additional daily visits per provider, enabled by shifting time from administrative tasks to seeing patients. The range of adoption rates for this scenario will be set by the adoption rate of AI-enabled administrative tools. However, given the varied impacts of other interventions on productivity, the below methodology will discuss alternative potential productivity improvements. Both inputs are informed by external research conducted across health systems.

Methodology

Adoption rate. The minimum adoption rate is set at 28 percent, representing a threshold sufficient to generate observable impact. Current AI scribe tools have an adoption rate of 28 percent. According to an MGMA Stat poll conducted in May 2024, 28 percent of medical groups report using ambient AI technology specifically to transcribe speech or draft notes.[27] The theoretical maximum adoption rate is set at 90 percent, reflecting a scenario where almost all primary care providers use AI admin tools. The model assumes the toggled adoption rate will be reached over a ten-year period (modeled linearly) to reflect gradual uptake.

Realized productivity improvements. Minimum productivity gains are set at one visit, reflecting ability of current AI admin tools to unlock one additional visit per primary care provider, as seen in research and press releases from Digital Health Insights,[28] Nuance and Microsoft,[29] and Advisory Board.[30] Theoretical maximum productivity gains are set at eight visits, assuming an intervention is able to address all administrative work. This estimate assumes a primary care provider works 10.0 hours per day, made up of 7.5 hours of visits (15, 30-minute slots) and 2.5 hours of nonvisit work. Research in the *Journal of General Internal Medicine* shows that 30 percent of visit time and 85 percent of nonvisit time is administrative, which sums to about four hours per

[26] "Workforce projections," HRSA, accessed November 13, 2025.
[27] "Ambient AI solution adoption in medical practices," Medical Group Management Association, 2024.
[28] "Ambient AI rescues clinician time at university health," Digital Health Insights, July 21, 2025.
[29] "Beacon Health System boosts patient volumes and enhances care," Nuance Communications, November 2023.
[30] "How University of Michigan Health-West improved clinician well-being," Advisory Board, October 2023.

day of administrative work (or eight visits).[31] The model assumes that the toggled productivity improvements will be reached over a five-year period (modeled linearly), reflecting gradual increases in efficacy.

Other potential productivity improvement scenarios. There are several other potential examples of productivity improvements, such as team-based care models, smarter capacity scheduling, and use of telehealth systems. Under a team-based care model, physicians could increase their daily visit capacity by about two visits. According to the *Journal of Family Practice*, unlocking the additional visits requires hiring or training certified medical assistants and licensed practical nurses to serve as care team coordinators.[32] Smarter capacity scheduling (for example, tools such as automated reminders and electronic booking systems) and telehealth could help allow about 0.5 additional visits per day. This estimate assumes a provider performing 15 visits per day and a no-show rate of 15 percent.[33]

FIGURE 8

Input ranges for supply scenarios consider workforce growth and improvement in the productivity of primary care physicians.

Workforce and productivity trends

	Metric	Minimum	Theoretical maximum
Workforce growth	Annual additional primary care entrants per year	0	1,800
Productivity improvement interventions for primary care physicians	Adoption rate (across primary care providers), %	0	90
	Realized productivity improvements (additional visits per primary care provider per day)	1	8

Source: McKinsey Health Institute and West Health analysis

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[31] Fabrizio Toscano et al., "How physicians spend their work time: an ecological momentary assessment," *Journal of General Internal Medicine*, 2020, Volume 35.

[32] James Jerzak et al., "Advanced team-based care: How we made it work," *The Journal of Family Practice*, September 2019, Volume 68, Number 7.

[33] Michael P. Soos et al., "Evaluation of clinical no-show rates in the setting of an outpatient internal medicine residency clinic," *Osteopathic Family Physician*, September/October 2020, Volume 12, Number 5; Linda V. Green et al., "The impact of telehealth on primary care physician panel sizes: A modeling study," *Journal of the American Board of Family Medicine*, 2022, Volume 35, Number 5.