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Preferred networks and pharmacy access in Part D

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Presentation roadmap

1. Background on pharmacy networks
2. Measuring access to retail pharmacies
3. Estimating associations between changes in access and prescription fills
4. Mechanisms driving changes in pharmacy access
5. Discussion

Part D beneficiaries obtain prescription drugs through plan pharmacy networks

- Medicare Part D beneficiaries obtain prescription drugs through retail and mail-order pharmacies
- Part D plans contract with pharmacies to form plan-specific pharmacy networks
- Pharmacy networks determine where beneficiaries can fill prescriptions at in-network rates and affect beneficiary cost-sharing and convenience
- Network pharmacies accept a beneficiary's insurance and provide access to in-network prices
- Many Part D plans designate a subset of network pharmacies as preferred pharmacies

Preferred status may affect beneficiary costs and pharmacy choice

- Preferred pharmacies generally offer lower copays and coinsurance
- Evidence suggests that some beneficiaries respond to price signals and choose preferred pharmacies
- For pharmacies, preferred status may involve a trade-off between lower reimbursement and higher prescription volume
- Part D plans must satisfy "convenient access standards" for network pharmacies, but not necessarily for preferred pharmacies

Source: Xu et al. 2023, Starc and Swanson 2021, FTC 2024

Literature

- Recent work has documented growing pharmacy closures and the emergence of pharmacy deserts, particularly in underserved communities
  - Guadamuz et al. (2024), Wittenaeuer et al. (2024), Catalano et al. (2024)
- Pharmacy access matters for medication utilization and adherence
  - Battles (2026), Qato (2019)
- Preferred pharmacy networks lower beneficiary out-of-pocket costs and steer utilization toward preferred pharmacies
  - Starc and Swanson (2021), Xu et al. (2023)

Research Question

How does access to retail, in-network, and preferred pharmacies vary across plans and geographic areas?

How do changes in pharmacy access along these margins affect:

Prescription utilization	Retail versus mail-order dispensing	Beneficiary out-of-pocket spending

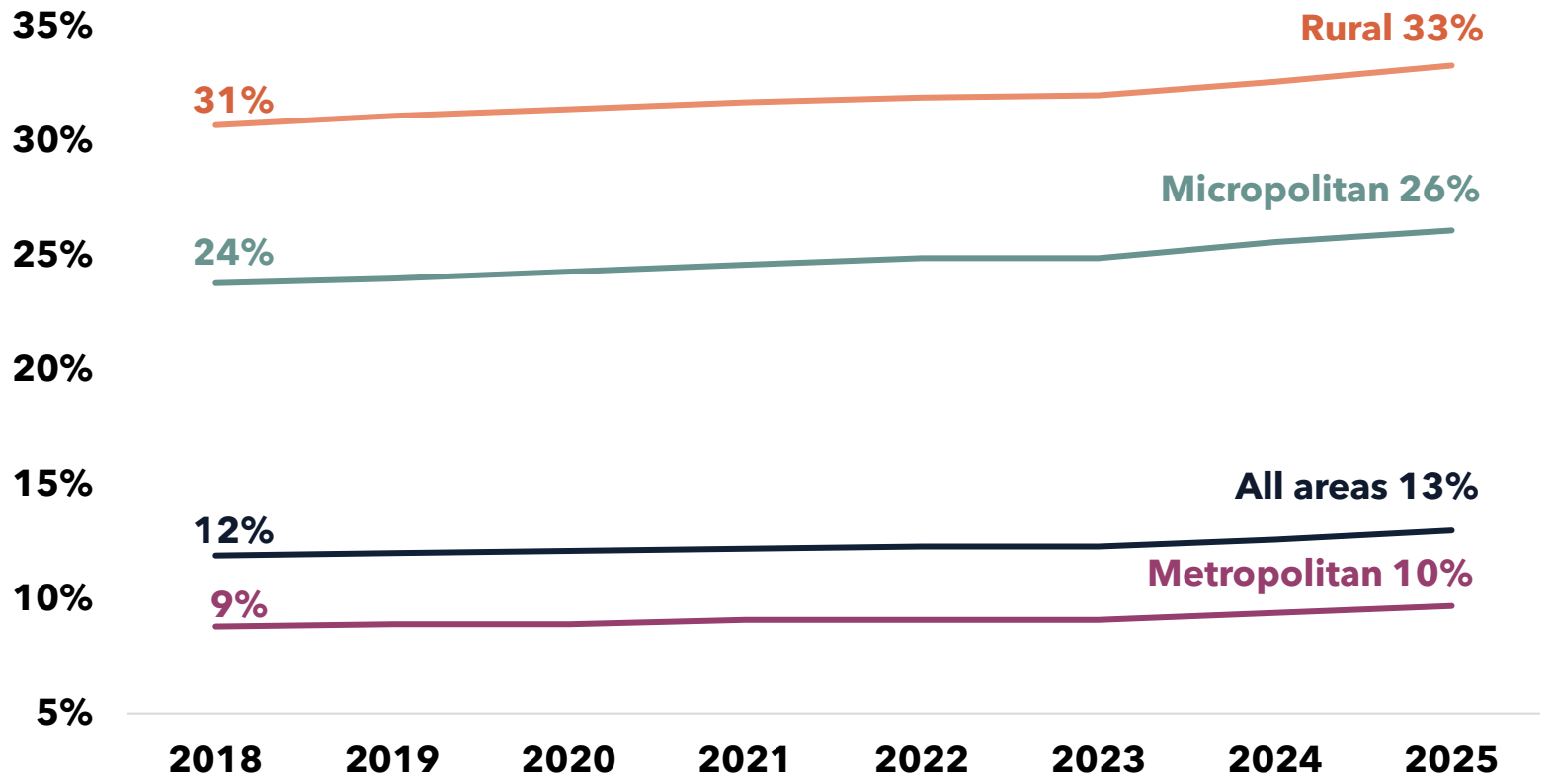
Preview of findings

- Approximately 13% of beneficiaries live in ZIP codes without a retail pharmacy, though fewer than 1% lack access at the county level
- Access to in-network pharmacies mirrors the availability of local retail pharmacies
- Access to preferred pharmacies is more limited, particularly in rural areas
  - ~65% of rural beneficiaries lack access to a preferred pharmacy in their ZIP
  - ~36% lack access in their county
- Increased access to in-network and preferred pharmacies is associated with shift in utilization toward retail dispensing and away from mail-order pharmacies
- Losses of preferred pharmacy access are associated with higher beneficiary out-of-pocket spending
- Changes in pharmacy access reflect both pharmacy openings and closures and network contracting changes

Data Sources

- Pharmacy location, characteristics, and opening/closure data from the National Council for Prescription Drug Programs (NCPDP)
- Pharmacy network participation from the Centers for Medicare & Medicaid Services (CMS) Medicare Part D Pharmacy Network files
  - **Focusing on stand-alone PDPs in the period 2021-2025**
- Plan characteristics and enrollment from CMS Part D Landscape, Formulary, and Enrollment files
- Prescription utilization, spending, and dispensing outcomes from Medicare Part D Prescription Drug Event (PDE) data

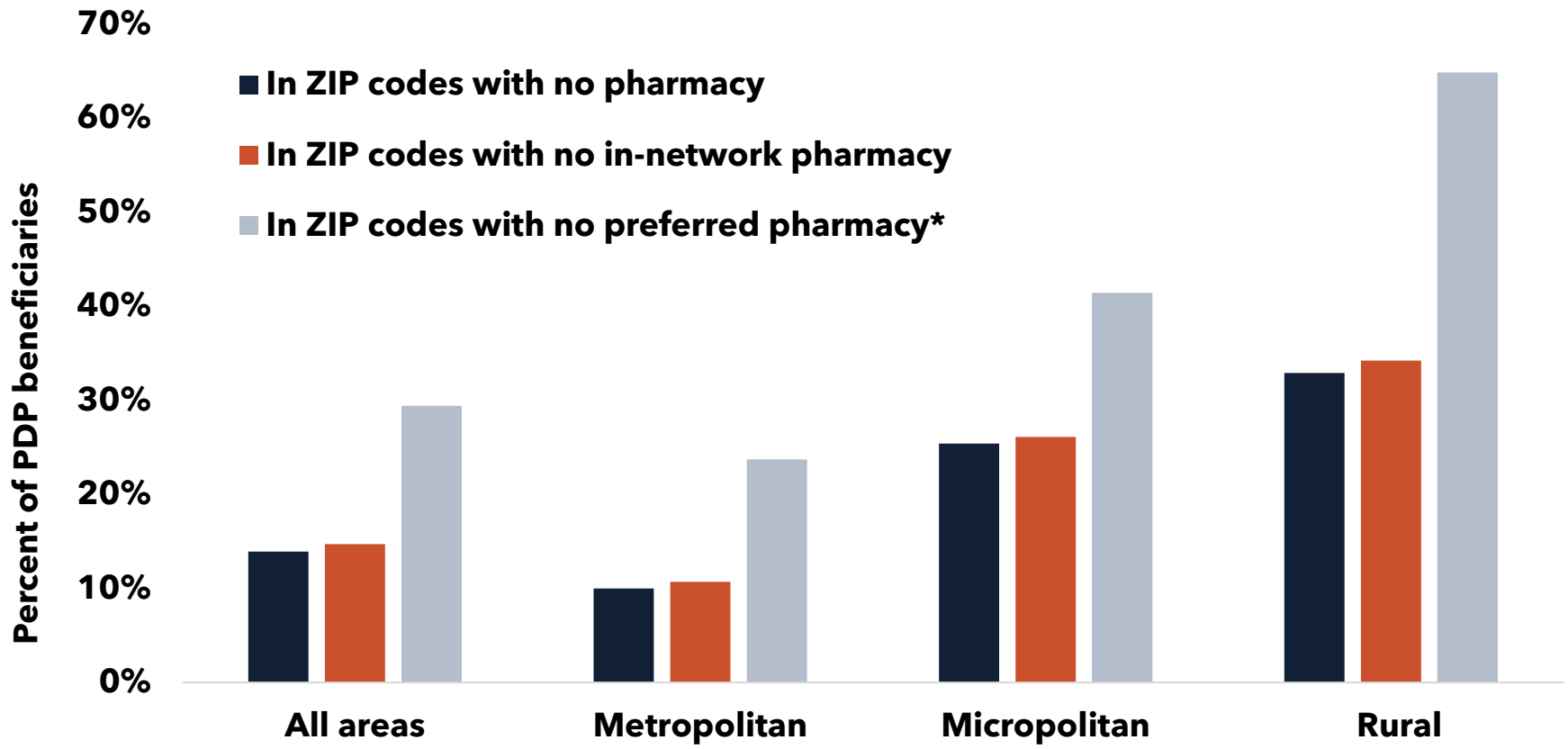
Increase in Part D beneficiaries living in ZIP codes with no pharmacies, 2018-2025



Note: The analysis is limited to ZIP codes with at least one Medicare Part D beneficiary. Shares reflect the percentage of Medicare Part D beneficiaries residing in ZIP codes that contain no retail pharmacy in the National Council for Prescription Drug Programs database. Metropolitan, micropolitan, and rural designations based on Office of Management and Budget's core-based statistical areas

Source: MedPAC analysis of National Council for Prescription Drug Programs pharmacy data and Centers for Medicare & Medicaid Services Medicare Part D enrollment data.

Beneficiary access to in-network and preferred pharmacies differs by geographic area, 2024



Note: PDP (prescription drug plan). Preferred statistic is restricted to PDP enrollees enrolled in plans that offer a preferred pharmacy tier. Metropolitan, micropolitan, and rural designations based on Office of Management and Budget's core-based statistical areas.

Source: MedPAC analysis of Centers for Medicare & Medicaid Services (CMS) Part D pharmacy network data, CMS Part D enrollment data, and the National Council for Prescription Drug Programs data.

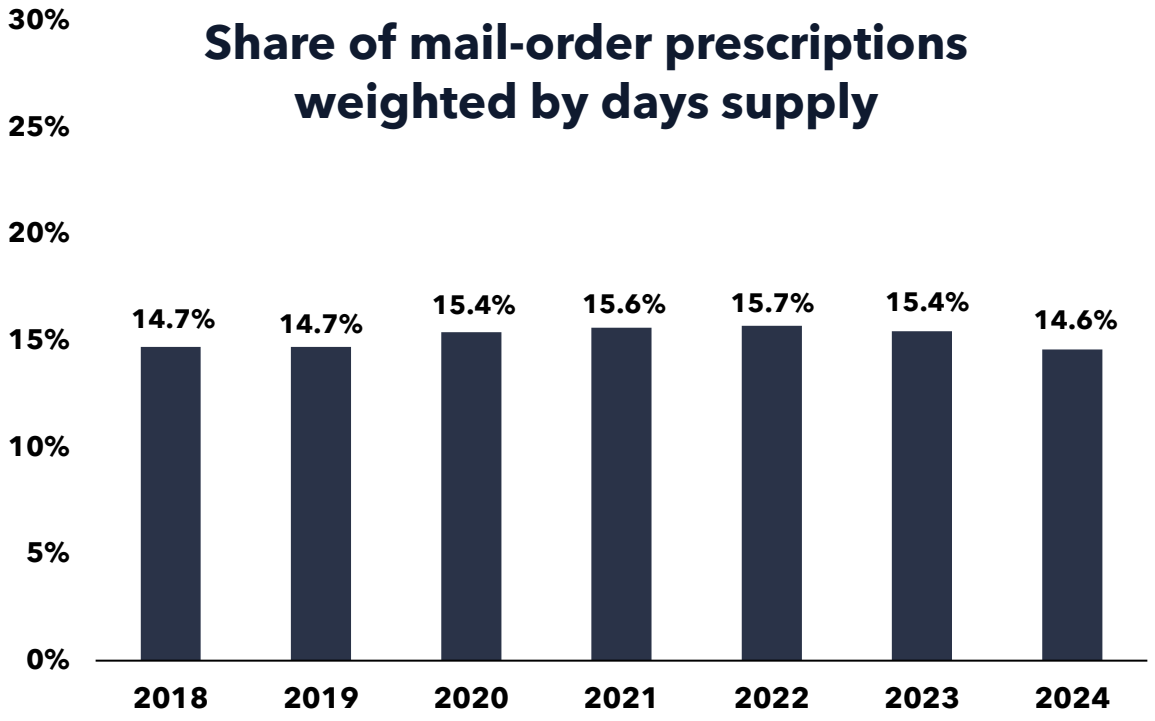
Broad access to in-network pharmacies, but preferred pharmacy access is limited in rural areas

	Share of beneficiaries, 2024	
	ZIP	County
Share of beneficiaries with no in-network pharmacy		
All Areas	15%	<1%
Metropolitan	11	<1
Micropolitan	26	<1
Rural	34	2
Share of beneficiaries with no preferred pharmacy		
All Areas	29%	5%
Metropolitan	23	1
Micropolitan	41	4
Rural	65	36

Note: Preferred statistic is restricted to PDP enrollees enrolled in plans that offer a preferred pharmacy tier. Metropolitan, micropolitan, and rural designations based on Office of Management and Budget's core-based statistical areas.

Source: MedPAC analysis of Centers for Medicare & Medicaid Services (CMS) Part D pharmacy network data, CMS Part D enrollment data, and the National Council for Prescription Drug Programs data.

Role of mail-order pharmacies in ensuring beneficiary access



Note:
Source: MedPAC analysis of PDE data.

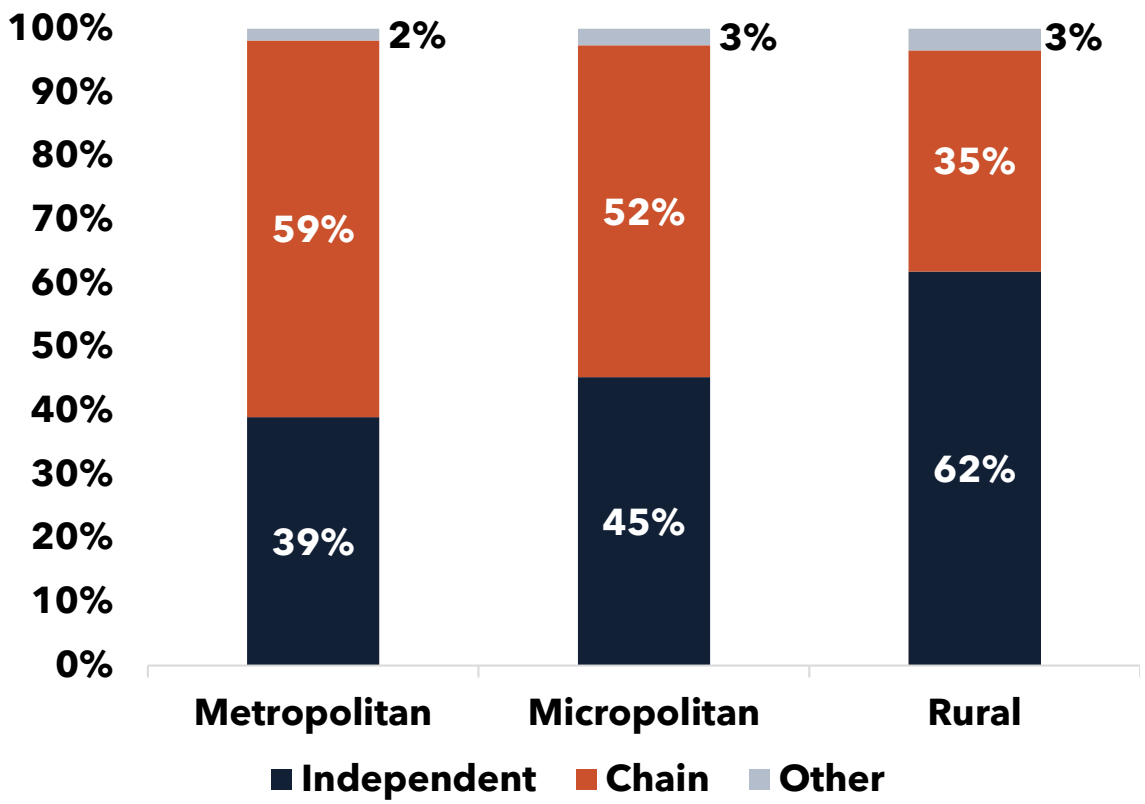
- Mail-order pharmacies could improve access for individuals residing in areas with few or no retail pharmacies
- Use of mail-order pharmacy may differ by individual's access to retail or network/preferred pharmacies

Most PDPs use a preferred pharmacy designation, with large differences by ownership type

- In 2024, 96% of PDP enrollees were in plans that used a preferred designation for a subset of in-network pharmacies
- In 2025, on average, about 44% of in-network pharmacies were designated preferred
  - Preferred status differs sharply by ownership type, with ~66% of chains designated as preferred vs. ~3% among independents
- Preferred networks have evolved over time and have become increasingly concentrated among chain pharmacies

Note: PDP (prescription drug plan). Statistics are PDP enrollment-weighted averages.
Source: MedPAC analysis of Centers for Medicare & Medicaid Services (CMS) Part D pharmacy network data, CMS Part D enrollment data, and the National Council for Prescription Drug Programs data.

Pharmacy ownership varied across geographic areas, 2025



Note: Average shares of pharmacy ownership across ZIP codes in 2025 by urbanicity. Metropolitan, micropolitan, and rural designations based on Office of Management and Budget's core-based statistical areas.

Source: MedPAC analysis of the National Council for Prescription Drug Programs data.

- ZIP codes in metropolitan areas had the highest average chain share
- Rural ZIP codes were predominantly served by independent pharmacies
- The effects of preferred pharmacy contracting may vary by urbanicity, as preferred contracting disproportionately occurs with chain pharmacies while rural areas rely more heavily on independent pharmacies

Empirical method for the analysis of associations between pharmacy access and utilization

$$Y_{pzt} = \beta_1 N_{pzt} + \beta_2 P_{pzt} + \beta_3 T_{zt} + \gamma LIS_{pzt} + \alpha_{pz} + \alpha_{pt} + \varepsilon_{pzt}$$

Where:

- Y_{pzt} is the relevant outcome at the plan-geography-year level, calculated per beneficiary and log-transformed when appropriate
- N_{pzt} is the presence of at least one network pharmacy
- P_{pzt} is the presence of at least one preferred pharmacy
- T_{zt} is the total number of pharmacies in the geography, transformed by asinh
- LIS_{pzt} is the share of LIS beneficiaries in the plan-geography
- Regression includes plan-geography FE and plan-year FE

Note:
Source:

Presence of network and preferred pharmacies is associated with substitution away from mail-order

	Retail Spending	Mail Spending	Retail Days Supply	Mail Days Supply	Retail OOP
ZIP Level					
In-network pharmacy present	+4.2%***	-3.4%	+2.3%***	-3.6%***	+4.1%***
Preferred pharmacy present	-0.5	-4.6***	+1.2***	-3.4***	-2.0***
County Level					
In-network pharmacy present	+10.0***	-1.5	+6.8%***	-10.5%***	+8.8%***
Preferred pharmacy present	+0.4	-16.2***	+3.7***	-11.1***	-2.3***

Note: Outcomes are measured per beneficiary and are log-transformed. Retail and mail-order outcomes are defined based on the dispensing channel and exclude specialty pharmacy claims. All regressions are weighted by the number of beneficiaries and standard errors are clustered at the plan and geography levels. * p<0.05, ** p<0.01, *** p<0.001.

Source: MedPAC analysis of Centers for Medicare & Medicaid Services (CMS) Part D pharmacy network data, CMS Part D enrollment data, and the National Council for Prescription Drug Programs data.

Associations between changes in pharmacy access and utilization

$$\Delta Y_{pzt} = \beta_1 Net.Entry_{pzt} + \beta_2 Net.Exit_{pzt} + \beta_3 Pref.Entry_{pzt} + \beta_4 Pref.Exit_{pzt} + \beta_5 T_{z,t-1} + \gamma \Delta LIS_{pzt} + \alpha_{pt} + \varepsilon_{pzt}$$

Where:

- Y_{pzt} is the change in the relevant outcome at the plan-geography-year level, calculated per beneficiary and log-transformed when appropriate
- Net. Entry$_{pzt}$, Net. Exit$_{pzt}$, Pref. Entry$_{pzt}$, Pref. Exit$_{pzt}$ are indicators capturing transitions between zero and at least one in-network or preferred pharmacy
- $T_{z,t-1}$ is the total number of pharmacies in the geography in the previous year, asinh
- ΔLIS_{pzt} is the change in share of LIS beneficiaries in the plan-geography
- Regression includes plan-year FE

Note:
Source:

Changes in pharmacy access reallocate utilization across dispensing channels

	County Level Outcomes				
	Δ Retail Spending	**Δ Mail Spending**	**Δ Retail Days Supply**	**Δ Mail Days Supply**	**Δ Retail OOP**
In-network pharmacy entry	+25.9%***	+0.1	+11.2%***	-12.4%***	+16.5%***
In-network pharmacy exit	-12.1***	+4.3	-7.3***	+11.2***	-9.1***
Preferred pharmacy entry	+4.8*	-4.5	+11.2***	-10.0***	+1.3
Preferred pharmacy exit	-1.8	+16.7***	-1.4***	+9.6***	+2.4***

Note: Outcomes are measured per beneficiary and are log-transformed. Retail and mail-order outcomes are defined based on the dispensing channel and exclude specialty pharmacy claims. All regressions are weighted by the number of beneficiaries and standard errors are clustered at the plan and geography levels. * p<0.05, ** p<0.01, *** p<0.001.

Source: MedPAC analysis of Centers for Medicare & Medicaid Services (CMS) Part D pharmacy network data, CMS Part D enrollment data, and the National Council for Prescription Drug Programs data.

What is driving changes in pharmacy networks?

Year	Total network exit rate	Exit rate: pharmacy closures	Exit rate: contract change
2022	3.7%	2.8%	0.9%
2023	4.7	3.1	1.5
2024	8.1	4.9	3.2

Source: MedPAC analysis of Centers for Medicare & Medicaid Services (CMS) Part D pharmacy network data, CMS Part D enrollment data, and the National Council for Prescription Drug Programs data.

- Network changes can be due to:
  - Pharmacies opening and closing
  - Contract changes – pharmacies remain open but leave or join a plan's network due to changes in contracting arrangements
- Recent contraction in pharmacy networks reflect both declining physical pharmacy availability and increasing changes in contracting relationships between plans and pharmacies

Summary

- Retail pharmacy access remains relatively broad overall, but meaningful gaps emerge when focusing on preferred pharmacy access
- Approximately 65% of rural beneficiaries lack access to a preferred pharmacy in their ZIP code, and 36% lack access in their county
- Increased access to in-network and preferred pharmacies is associated with greater retail utilization and lower reliance on mail-order dispensing
- Potential extensions:
  - Examine the role of differential cost sharing at preferred pharmacies and quantify potential beneficiary savings
  - Further investigate the role of PBMs and vertical integration in shaping preferred pharmacy network design
  - Explore heterogeneity across urban, suburban, and rural markets and low SES areas

Discussion

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