National Trends in Post-ED Follow-Ups for Asthma: Characterizing the Gaps Between Clinical Guidelines for Asthma Care & Health Care Utilization Patterns Across Commercial and Medicaid Health Plans

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Research Objective

In 2021, **6.5% of children** and **8% of adults** in the United States had asthma.[1] If uncontrolled, asthma can drive substantial health and economic consequences. Between 2019 and 2038, uncontrolled asthma is projected to be associated with a loss of **15.46 million** quality adjusted life-years, **$300.6 billion** in direct costs and between **$2,209 - $6,132** in per capita costs.[2]

Recent asthma care guidelines attempt to drive better asthma control by underscoring the importance of timely outpatient follow-up after exacerbations that necessitate acute care.[3,4] Epidemiological and health care utilization data indicate that patients frequently use the emergency department (ED) for asthma exacerbations. **This study provides new insights on the frequency and distribution of outpatient follow-up visits after ED visits for asthma across commercial and Medicaid health plans.**

Methodology & Study Population

Data: De-identified claims from *01/01/23 to 12/31/23*
Source:
- **Commercial:** Optum Labs Data Warehouse[5]
- **Medicaid:** Merative MarketScan® Medicaid Database[6]

METHODS
1. **Group** claims into "pseudo-plans"
2. **Remove** pseudo-plans with <30 ED visits
3. **Stratify** results by:
   - Age
   - Sex
   - History of COPD
   - Social deprivation index (SDI)** (*commercial plans only*)

**SDI measures the relative deprivation of an area. It is calculated by ranking areas from most to least deprived using 10 equal deciles.[7]*

1st Decile – Lowest Deprivation

10th Decile – Highest Deprivation

INITIAL POPULATION (IP)

IP criteria:
- Aged 5-64 by 12/31/23

Exclusions
- Members with acute respiratory failure, cystic fibrosis or emphysema
- Members that used hospice
- Members that died

NUMERATOR ..... Outpatient/telehealth visit within 30 days after an ED visit

DENOMINATOR .... ED visits with a principal diagnosis of asthma

Table 1: Study Population by Plan Type

	Commercial	Medicaid
IP (individuals)	721,259	102,141
Denominator (ED visits)	17,225	19,214
Denominator (per capita)	2.4%	18.8%
Numerator (follow-up visits)	7,944	6,508
Follow-Up Rate (%)	46.1	33.9

Principal Findings

Figure 1: Results by Demographic Categories (Commercial & Medicaid Populations)

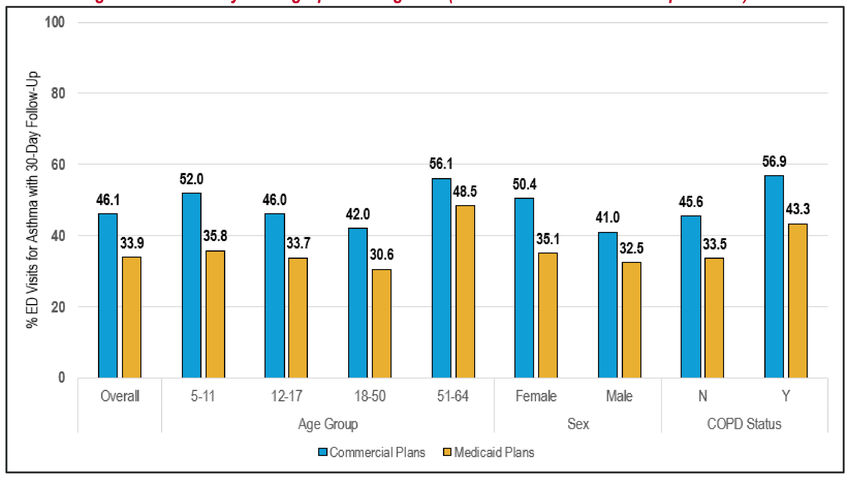

Table 3: Results by SDI Decile (Commercial)

SDI Decile	ED Visits for Asthma (N)	30-Day F/U Visits (N)	ED Visits with 30-Day F/U (%)
1st	1,947	1,034	53.1
2nd	1,860	987	53.1
Deciles 3 – 8 omitted for space			
9th	1,620	660	40.7
10th	1,743	683	39.2

Table 2: Results by Race Category (Medicaid)

Race Category	ED Visits for Asthma (N)	30-Day F/U Visits (N)	ED Visits with 30-Day F/U (%)
White	5,378	2,276	42.3
Black	11,403	3,305	29.0
Hispanic	440	168	38.2
Other	1,033	398	38.5
Missing	960	361	37.6

Table 4: Performance Distribution Across Plans - Follow-Up Rates

Product Line	N of Plans	Mean	St. Dev.	Percentile Distribution						
				Min.	10th	25th	50th	75th	90th	Max.
Commercial	31	46.8	5.7	31.5	42.0	44.1	46.8	49.5	53.3	59.1
Medicaid	23	37.0	8.4	22.6	27.3	32.0	34.8	42.2	48.8	52.8

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Conclusions & Policy Implications

ED visits for asthma appear to be associated with multiple social/demographic strata. Fewer than half of the identified ED visits for asthma were followed by appropriate and timely care (i.e., an outpatient or telehealth visit within 30 days), even when covered by insurance. Follow-up visit rates varied across health plans and by demographic strata (SDI; COPD diagnosis; sex), indicating multiple opportunities to better align plan performance with best practices for asthma.

Health plans aiming to address members' asthma in a way that aligns with recent asthma guidelines could enhance efforts to provide adequate care coordination services and promote the use of preventive primary care. Results indicate that these solutions may be especially relevant for individuals in areas of high social deprivation.

This research informed the development of a new HEDIS®[8] measure. *Follow-Up After Acute Care and Urgent Care Visits for Asthma (AAF-E) will enter first year reporting for MY 2026.*

HEDIS MY 2026

Read NCQA's *Improving Outcomes for People with Asthma: Challenges & A Call to Action* White Paper

Endnotes

1. Centers for Disease Control and Prevention. 2023. "Most Recent National Asthma Data." Asthma. May 10, 2023. https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm

2. Yaghoubi, Mohsen, Amin Adibi, Abdollah Safari, J. Mark FitzGerald, and Mohsen Sadatsafavi. 2019. "The Projected Economic and Health Burden of Uncontrolled Asthma in the United States." American Journal of Respiratory and Critical Care Medicine 200 (9): 1102–12. https://doi.org/10.1164/rccm.201901-0016OC

3. Global Initiative for Asthma. 2024. 2024 Global Strategy for Asthma Management and Prevention. *Global Initiative for Asthma*.2024. https://ginasthma.org/wp-content/uploads/2024/05/GINA-2024-Strategy-Report-24_05_22_WMS.pdf

4. National Asthma Education and Prevention Program Coordinating Committee Expert Panel Working Group. 2020 Focused Updates to the Asthma Management Guidelines. *National Heart, Lung, and Blood Institute*. 2021. https://www.nhlbi.nih.gov/resources/2020-focused-updates-asthma-management-guidelines

5. Data for commercial plan analyses was obtained from the OptumLabs® Data Warehouse. The OptumLabs® Data Warehouse contains de-identified administrative claims and other data elements, representing a diverse mixture of ages, ethnicities and geographical regions across the United States. The claims data in OLDW includes medical and pharmacy claims, laboratory results and enrollment records for commercial and Medicare Advantage enrollees. Study data were accessed using techniques compliant with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and, because this study involved analysis of pre-existing, de-identified data, it was exempt from Institutional Review Board approval.

6. Data for Medicaid plan analyses used MY 2023 data from the Merative™ MarketScan® Multi-State Medicaid Database. The MarketScan database consists of individual-level, de-identified healthcare claims across the continuum of care (e.g., inpatient, outpatient, long-term care, outpatient pharmacy) as well as enrollment data. The database contains data from Medicaid programs in numerous geographically diverse states and is fully compliant with U.S. privacy laws and regulations (i.e., HIPAA). Because this study involved analysis of pre-existing, de-identified data, it was exempt from Institutional Review Board approval. The database contains approximately 8 million Medicaid enrollees covered under fee-for-service and managed care plans. The results presented here focus on managed care enrollees.

7. The SDI data in OLDW is sourced from the 2015-2019 American Community Survey (ACS), which is an annual demographics survey program conducted by the U.S. Census Bureau. Additional information on the Social Deprivation Index can be found at the following webpage: https://www.graham-center.org/maps-data-tools/social-deprivation-index.html

8. HEDIS is a registered trademark of the National Committee for Quality Assurance.