

# Utilization of Outpatient Care Services for Cardiovascular and Diabetes Conditions Among Medicaid Enrollees in New York State

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## ABSTRACT

**Purpose of study:** This study describes the utilization of cardiovascular and diabetes services by Medicaid patients in New York State.

**Methods:** The study analyzed Medicaid claims data in outpatient settings (private physicians, free-standing clinics, hospital outpatient departments) or emergency departments in the FFY 2013. The study population consisted of adults aged 18 to 64 years who made at least 1 visit for cardiovascular (ICD-9 codes 390-459) or diabetes (ICD-9 codes 249-250) services.

**Key Findings:** Patients seeking cardiovascular and diabetes services in rural areas were more likely to obtain them from primary care physicians (52% vs 42%), other providers (8% vs 5%) such as physician assistants and nurse practitioners, and in emergency departments (8% vs 6%) compared to urban areas. By contrast, patients seeking these services in urban areas were more likely to obtain them from cardiologists and endocrinologists (12% vs 7%) and other medical specialists (40% vs 25%). The access to cardiovascular and diabetes services was higher in emergency departments than in outpatient settings for Black Medicaid patients (34% vs 22%). In nearly half of rural counties, Medicaid patients received the majority of cardiovascular or diabetes services outside their county of residence.

**Implications:** There is great variation in Medicaid patient access to cardiovascular and diabetes services in New York State. Cardiologists, endocrinologists, and other specialists tend not to practice in rural areas; as a result, Medicaid patients in rural areas are more likely to receive these services from primary care practitioners than from specialists. There are also differences in access by race/ethnicity, with Black Medicaid patients receiving more services in emergency departments. It is critical to understand impacts of these variations on health outcomes.

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## INTRODUCTION

- Low-income New Yorkers have higher rates of diabetes, obesity, cardiovascular disease, and coronary heart disease than all other income groups.<sup>1</sup>
- Additionally, low-income New Yorkers, especially those on Medicaid, tend to use emergency departments for primary care.
- This research reports on an analysis of Medicaid patients' use of outpatient and emergency department services for cardiovascular and diabetes conditions in New York State, using claims data for patients ages 18 to 64 during the 2013 federal fiscal year (FFY).

## METHODS

- Medicaid claims data were extracted using Salient Medicaid Solutions Data, a database that contains claims from the New York Medicaid Data Warehouse.
- The study population consisted of patients between the ages of 18 and 64 who made at least 1 visit to an outpatient setting or emergency department and had at least 1 cardiovascular (ICD-9 codes 390-459) or diabetes (ICD-9 codes 249-250) service in the FFY 2013 (October 2012-September 2013).
- Service location was limited to outpatient settings (private physicians, free-standing clinics, or hospital outpatient departments) and emergency department visits that did not result in an inpatient stay.

## RESULTS

Medicaid patients in rural<sup>2</sup> areas are more likely to obtain cardiovascular and diabetes services from primary care physicians, physician assistants, nurse practitioners, and in emergency departments than Medicaid patients in urban areas.

**Table 1. Percent Distribution of Who Provided Cardiovascular and Diabetes Services by Setting of Service, Specialty, and Rural/Urban Status, FFY 2013**

County of Service	Outpatient Physician Services				Hospital Emergency Department Services
	Cardiologists and Endocrinologists	Other Medical Specialists	Primary Care Physicians	Other <sup>a</sup> Providers	
Rural	7.3%	25.0%	51.8%	7.9%	7.9%
Urban	11.5%	35.9%	42.1%	4.7%	5.8%
Statewide	10.9%	34.4%	43.5%	5.1%	6.1%

<sup>a</sup> Other Providers includes: Physician Assistant, Nurse Practitioner, Physical Therapist, Optometrist, Podiatrist, Registered Nurse, Registered Dietitian, Occupational Therapist, Diabetes Educator.

## RESULTS (con't)

Black<sup>a</sup> Medicaid patients were more likely to access to cardiovascular and diabetes services in hospital emergency departments than in outpatient settings.

**Table 2. Percent Distribution of Patients with Cardiovascular and Diabetes Services by Race/Ethnicity<sup>a</sup> and Rural/Urban Status, FFY 2013**

County of Residence and Type of Settings	White	Black	Asian	Hispanic	Other <sup>b</sup>
Rural					
Outpatient Settings	85.4%	5.7%	0.8%	5.0%	3.0%
Emergency Departments	83.0%	7.8%	0.5%	5.9%	2.8%
Urban					
Outpatient Settings	22.8%	23.7%	15.0%	30.2%	8.3%
Emergency Departments	19.4%	38.1%	4.0%	30.8%	7.7%
Statewide					
Outpatient Settings	29.5%	21.7%	13.5%	27.5%	7.8%
Emergency Departments	28.4%	33.8%	3.5%	27.3%	7.0%

<sup>a</sup> Hereafter, racial/ethnic categories are shortened: non-Hispanic White is referred to as White; non-Hispanic Black/African American is referred to as Black; Asian/Pacific Islander is referred to as Asian; and Hispanic/Latino is referred to as Hispanic.

<sup>b</sup> Non-Hispanic American Indian or Alaskan Native; Multiple Races; or Unknown.

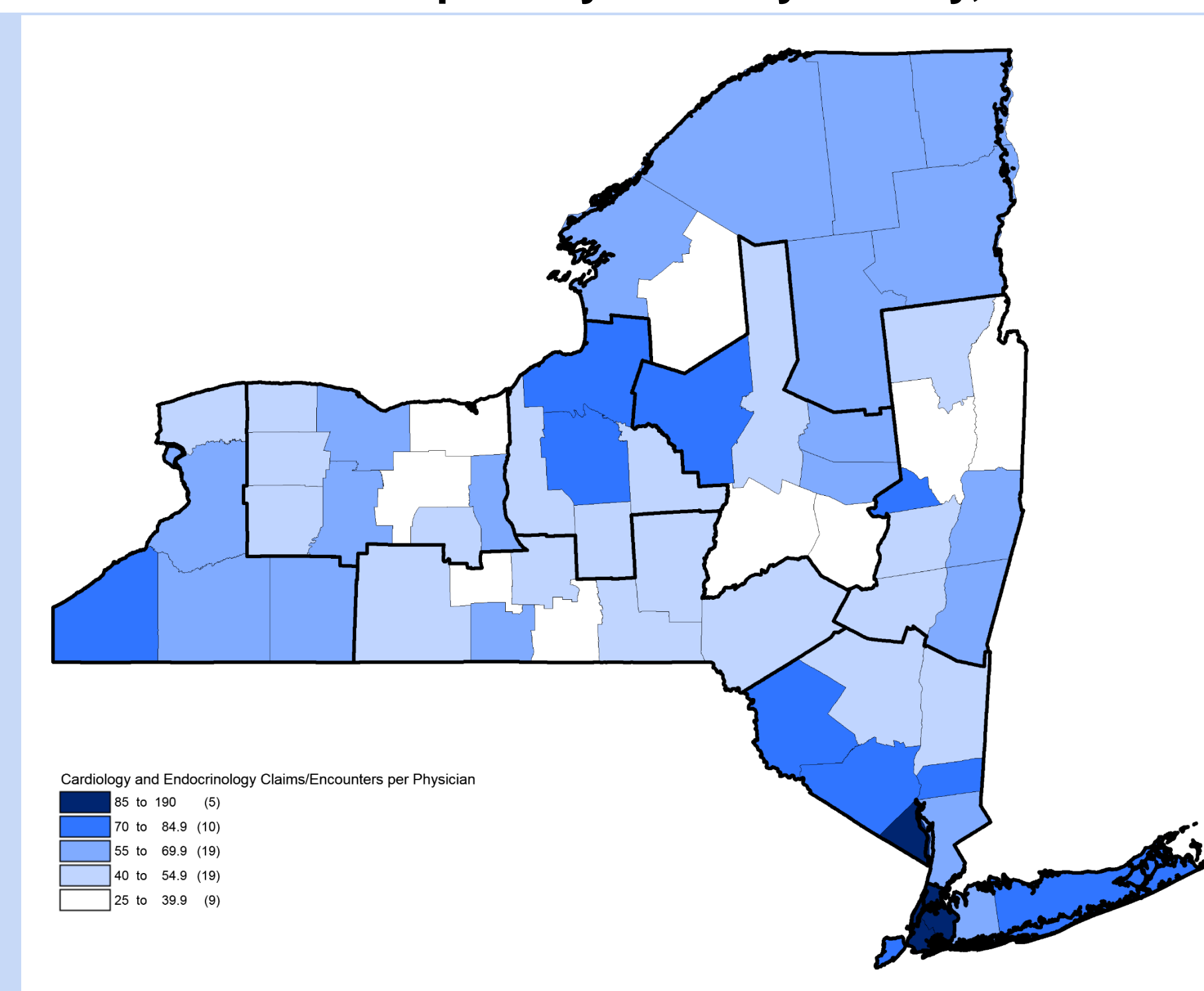
In many rural counties, Medicaid patients obtain the majority of their cardiovascular and diabetes services outside their county of residence.

**Table 3. Percent Distribution of Counties by Patient Commuting Pattern and Rural/Urban Status, FFY 2013**

County of Residence	Percent of Patient Visits for Cardiovascular and Diabetes Services in County of Residence			
	0-24.9%	25-49.9%	50-74.9%	75% Plus
Rural	5 (11.6%)	15 (34.9%)	18 (41.9%)	5 (11.6%)
Urban	0 (0.0%)	1 (5.3%)	8 (42.1%)	10 (52.6%)
Statewide	5 (8.1%)	16 (25.8%)	26 (41.9%)	15 (24.2%)

Rural counties with small populations have the lowest average number of cardiovascular and diabetes visits per physician.

**Figure 1. Average Number of Outpatient Visits for Cardiovascular and Diabetes Services per Physician by County, FFY 2013**



## DISCUSSION

- Patients in rural areas were more likely to receive cardiovascular and diabetes services from primary care physicians, other providers, and in emergency departments compared to urban areas.
- Patients receiving these services in urban areas were more likely to obtain them from cardiologists and endocrinologists or other medical specialists.
- White and Hispanic Medicaid patients were equally likely to access cardiovascular and diabetes services in outpatient settings and in emergency departments.
- Black Medicaid patients were more likely to access these services in emergency departments than in outpatient settings, while Asian Medicaid patients were more likely to receive services in outpatient settings than emergency departments.
- Medicaid patients in urban counties received the majority of their cardiovascular or diabetes services in their counties of residence, while Medicaid patients in nearly half of rural counties received the majority of these services *outside* their counties of residence.
- Counties with the lowest average number of cardiovascular and diabetes-related visits per physician were all rural.
- Counties with the highest average number of cardiovascular and diabetes-related visits per physician were in New York City or the lower Hudson Valley.

## CONCLUSIONS

There is great variation in Medicaid patient access to cardiovascular and diabetes services in New York State. Cardiologists, endocrinologists, and other specialists tend not to practice in rural areas,<sup>3</sup> as a result, Medicaid patients in rural areas are more likely to receive these services from primary care practitioners than from specialists. There are also differences in access by race/ethnicity, with Black Medicaid patients receiving more services in hospital emergency departments. In addition, Medicaid patients in many rural counties travel outside their county of residence for these services.

## REFERENCES

- 1 New York State Department of Health, Behavioral Risk Factor Surveillance System.
- 2 This definition of rural and urban is based on Ebert's Typology as outlined in Article 2, Title 2C, Section 235 of the New York State Public Health Law.
- 3 Annual New York Physician Workforce Profile, 2010 Edition. The Center for Health Workforce Studies, 2011.

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