

New York State Primary Care
Scorecard
&
Primary Care County Data
Explorer

TECHNICAL APPENDIX



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Methodology

The analysis utilized a combination of Microsoft Excel Version 2311 and Tableau Version 23 to manage and visualize the data. Data were downloaded from various public sources in CSV or XLXS format. Datasets in CSV form were converted to XLXS form in Microsoft Excel. The data were joined into a county-level or state-level master dataset using Tableau and exported in CSV format. If necessary, state level values were estimated from county level data; details if applicable are provided in the detailed information for each metric. The master datasets were then converted to XLXS format in Microsoft Excel. Tableau was used for creating data visualizations.

Data preparation for the workforce section was conducted in SAS Enterprise Guide version 8.3. This process was conducted to validate that only active providers were included in the final analyses, confirm Medicaid acceptance rates, and categorize providers based on specialty.

The Scorecard presents data for the state of New York and where possible, disaggregates data by county. Figure 1 below presents the state and the counties and major cities for reference.

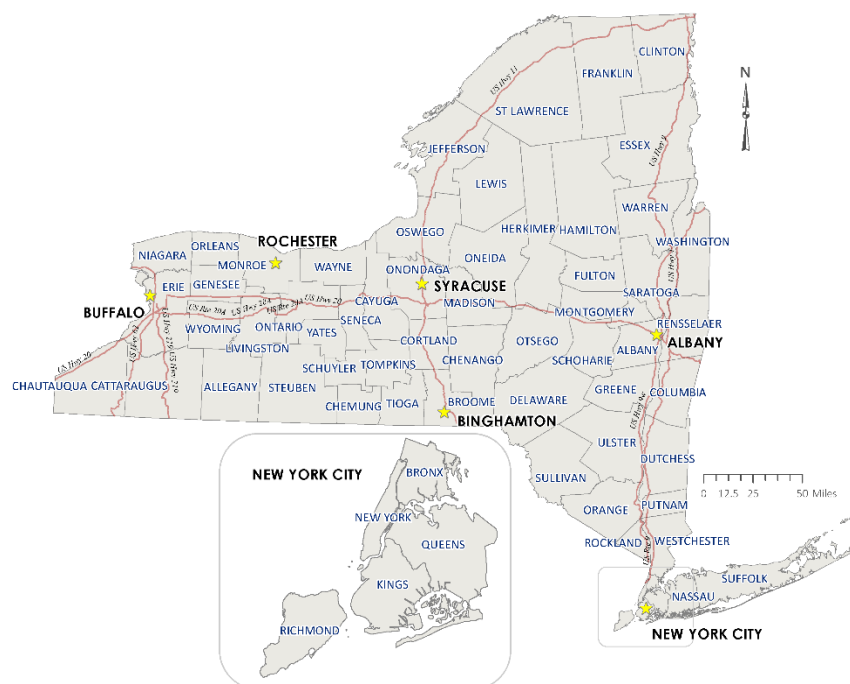


Figure 1. Map of New York State

Workforce Metrics

Rationale: Workforce measures are vital for evaluating primary care as it reflects the distribution of essential healthcare professionals. These metrics are important for assessing the availability and accessibility of primary care services across different demographic groups and emphasizing the importance of primary care as the foundation of the healthcare system. Additionally, workforce measures help identify disparities in healthcare access and distribution of healthcare professionals across New York state, guiding resource allocation and policy decisions to improve primary care delivery and ensure equitable access to services.

Rationale Citation: Pittman, Patricia, Candice Chen, Clese Erikson, Edward Salsberg, Qian Luo, Anushree Vichare, Sonal Batra, and Guenevere Burke. 2021. "Health Workforce for Health Equity." *Medical Care* 59 (Suppl 5): S405–8. <https://doi.org/10.1097/mlr.0000000000001609>.

Primary Care Workforce Definition

For the purposes of this Scorecard, the primary care provider supply is defined as MDs, DOs, NPs, PAs who work in an outpatient facility with a specialty of: Family Medicine, General Medicine, Internal Medicine, Pediatrics, or Geriatrics. This workforce definition is consistent with other primary care Scorecards, as outlined in the table below. Given the role of OB/GYN and Behavioral Health providers in providing primary care, ratios for these providers can be found in the Supplementary Data Tables.

Broad Definitions of Primary Care for Workforce Analysis

Organization/ Report Source	Broad Definition of Primary Care (to measure provider supply)*	Includes Pediatric Providers	Includes Behavioral Health Providers	Includes OB-GYN
Milbank Primary Care Scorecard	Physicians in family medicine, general practice, geriatrics, internal medicine, pediatrics, and med-peds. If a physician billed more than 90% of services from a hospital or ED, they were excluded. (Includes NP/PA in a separate measure)	✓	✗	✗
Commonwealth Scorecard	- No measurement for provider supply, only spend			
Massachusetts Scorecard	Physicians were counted as primary care physicians if their self-designated primary care specialty is one of the following: family medicine/general practice, internal medicine, preventative medicine, internal medicine/pediatrics, pediatrics or geriatric medicine. (Includes NP/PA in a separate measure)	✓	✗	✗
Virginia Scorecard	MD, DO, PA, NP, within pediatrics, family medicine, and general internal medicine.	✓	✗	✗

*Primary care definitions can vary between measures looking at Primary Care Spend vs Primary Care Provider Supply due to the details within claims data. The definitions above represent the measure definition used for Provider Supply only and may look different than the primary care definition used to capture spend at the same organization

Primary Care Providers per 100,000 Residents

Primary Care Providers per 100,000, New York				
Year	Total	Physicians (MD/DO)	Nurse Practitioners	Physician Assistants
2023	111.7	77.1	28.2	6.4

1. **Date Downloaded:**
 - a. Provider Data: IQVIA, December 4, 2023
 - i. Deactivated Providers List: NPPES, November 13, 2023
 - b. Population Data: ACS via IPUMS, November 17, 2023
2. **Description of metric:** Ratio of primary care providers per 100,000 residents. Includes physicians (MD/DO), nurse practitioners, and physician assistants. Providers were counted as primary care providers if their self-designated primary care specialty is one of the following: family medicine/general practice, internal medicine, preventative medicine, internal medicine/pediatrics, pediatrics or geriatric medicine.
 - a. **Numerator and Exclusions:** Provider Count
 - b. **Denominator and Exclusions:** Population Total
 - c. **Stratified by:**
 - i. Geographic: State (New York), County, Upstate/Downstate, Rural/Non-Rural.
Note: County level data for Primary Care Providers per 100,000 are available, not shown here.
 - ii. Provider Specialty: general primary care (family medicine/general practice, internal medicine, preventative medicine, internal medicine/pediatrics), pediatrics, and geriatrics.
 - iii. Provider Type: Physician (MD/DO), Nurse Practitioner, Physician Assistant.
 - d. **Imputation Methods:** $\frac{\text{number of unique providers} \times 100,000}{\text{total population}}$
3. **Data source and status:**
 - a. Provider Data: IQVIA
 - i. Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
 - b. Population Data: 2017-[2021 American Community Survey 5-Year Data via IPUMS](#)
 - c. Rural: [2022 Federal Office of Rural Health Policy Non-Metro Counties and Eligible Census Tracts in Metropolitan Counties Datafile.](#)
4. **Data cost:**
 - a. Provider Data: IQVIA, Proprietary
 - i. Deactivated Providers List: NPPES, Publicly Available
 - b. Population Data: ACS via IPUMS, Publicly Available
5. **Data release:**
 - a. Provider Data: IQVIA, purchased December 2023
 - i. Deactivated Providers List: NPPES, released November 11, 2023
 - b. Population Data: ACS via IPUMS, [released December 13, 2022](#)

Pediatricians per 100,000 Residents (ages 0-17)

Pediatricians per 100,000 Residents (ages 0-17), New York	
Year	Total
2023	126.3

- Date Downloaded:**
 - Provider Data: IQVIA, December 4, 2023
 - Deactivated Providers List: NPPES, November 13, 2023
 - Population Data: ACS via IPUMS, November 17, 2023
- Description of metric:** Ratio of pediatricians per 100,000 residents (ages 0-17), includes physicians (MD/DO), nurse practitioners, and physician assistants with a specialty in adolescent medicine/internal medicine, pediatrics/ internal medicine, adolescent medicine, pediatrics, child & adolescent psychiatry.
 - Numerator and Exclusions:** Provider Count
 - Denominator and Exclusions:** Population Total (Ages 0-17)
 - Stratified by:**
 - Geographic: State (New York), County, Upstate/Downstate, Rural/Non-Rural.
Note: County level data are available, not shown here.
 - Provider Type: Physician (MD/DO), Nurse Practitioner, Physician Assistant
- Data source and status:**
 - Provider Data: IQVIA
 - Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
 - Population Data: 2017-[2021 American Community Survey 5-Year Data by Age and Sex via IPUMS](#)
- Data cost:**
 - Provider Data: IQVIA, Proprietary
 - Deactivated Providers List: NPPES, Publicly Available
 - Population Data: ACS via IPUMS, Publicly Available
- Data release:**
 - Provider Data: IQVIA, purchased December 2023
 - Deactivated Providers List: NPPES, released November 11, 2023
 - Population Data: ACS via IPUMS, [released December 13, 2022](#)

Geriatricians per 100,000 Residents (ages 65 and above)

Geriatricians per 100,000 Residents (ages 65 and above), New York	
Year	Total
2023	12.8

- Date Downloaded:**
 - Provider Data: IQVIA, December 4, 2023
 - Deactivated Providers List: NPPES, November 13, 2023

- b. Population Data: ACS via IPUMS, November 17, 2023
2. **Description of metric:** Ratio of geriatricians per 100,000 residents (ages 65 and above), includes physicians (MD/DO), nurse practitioners, and physician assistants with a specialty in geriatric medicine/internal medicine and geriatric medicine/family medicine.
 - a. **Numerator and Exclusions:** Provider Count
 - b. **Denominator and Exclusions:** Population Total (ages 65 and above)
 - c. **Stratified by:** State (New York), County *Note: County level data are available, not shown here.*
3. **Data source and status:**
 - a. Provider Data: IQVIA
 - i. Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
 - b. Population Data: 2017-[2021 American Community Survey 5-Year Data by Age and Sex via IPUMS](#)
4. **Data cost:**
 - a. Provider Data: IQVIA, Proprietary
 - i. Deactivated Providers List: NPPES, Publicly Available
 - b. Population Data: ACS via IPUMS, Publicly Available
5. **Data release:**
 - a. Provider Data: IQVIA, purchased December 2023
 - i. Deactivated Providers List: NPPES, released November 11, 2023
 - b. Population Data: ACS via IPUMS, [released December 13, 2022](#)

OB-GYN Providers per 100,000 Residents (females ages 18-44)

OB-GYN Providers per 100,000 Residents (females ages 18-44), New York	
Year	Total
2023	93.4

1. **Date Downloaded:**
 - a. Provider Data: IQVIA, December 4, 2023
 - i. Deactivated Providers List: NPPES, November 13, 2023
 - b. Population Data: ACS via IPUMS, November 17, 2023
2. **Description of metric:** Ratio of OB-GYN providers 100,000 residents (females ages 18-44), includes physicians (MD/DO), nurse practitioners, and physician assistants with a specialty in obstetrics or gynecology.
 - a. **Numerator and Exclusions:** Provider Count
 - b. **Denominator and Exclusions:** Population Total (Females ages 18-44)
 - c. **Stratified by:**
 - i. Geographic: State (New York), County, Upstate/Downstate, Rural/Non-Rural. *Note: County level data are available, not shown here.*
 - ii. Provider Type: Physician (MD/DO), Nurse Practitioner, Physician Assistant
 - d. **Imputation Methods:** $\frac{\text{number of unique providers} \times 100,000}{\text{population (female, age 18-44)}}$
3. **Data source and status:**
 - a. Provider Data: IQVIA

- i. Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
 - b. Population Data: 2017-[2021 American Community Survey 5-Year Data by Age and Sex via IPUMS](#)
4. **Data cost:**
- a. Provider Data: IQVIA, Proprietary
 - i. Deactivated Providers List: NPPES, Publicly Available
 - b. Population Data: ACS via IPUMS, Publicly Available
 - c. Rural: [2022 Federal Office of Rural Health Policy Non-Metro Counties and Eligible Census Tracts in Metropolitan Counties Datafile.](#)
5. **Data release:**
- a. Provider Data: IQVIA, purchased December 2023
 - i. Deactivated Providers List: NPPES, released November 11, 2023
 - b. Population Data: ACS via IPUMS, [released December 13, 2022](#)

Behavioral Health Providers per 100,000 Residents

Behavioral Health Providers per 100,000 Residents, New York	
Year	Total
2023	16.3

1. **Date Downloaded:**
- a. Provider Data: IQVIA, December 4, 2023
 - i. Deactivated Providers List: NPPES, November 13, 2023
 - b. Population Data: ACS via IPUMS, November 17, 2023
2. **Description of metric:** Ratio of behavioral health providers per 100,000 residents, includes physicians (MD/DO), nurse practitioners, and physician assistants with a specialty in psychiatry.
- a. **Numerator and Exclusions:** Provider Count
 - b. **Denominator and Exclusions:** Population Total
 - c. **Stratified by:**
 - i. Geographic: State (New York), County, Upstate/Downstate, Rural/Non-Rural.
Note: County level data are available, not shown here.
 - ii. Provider Type: Physician (MD/DO), Nurse Practitioner, Physician Assistant
 - d. **Imputation Methods:** $\frac{(\text{number of unique providers} \times 100,000)}{\text{total population}}$
3. **Data source and status:**
- a. Provider Data: IQVIA
 - i. Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
 - b. Population Data: 2017-[2021 American Community Survey 5-Year Data via IPUMS](#)
 - c. Rural: [2022 Federal Office of Rural Health Policy Non-Metro Counties and Eligible Census Tracts in Metropolitan Counties Datafile.](#)
4. **Data cost:**
- a. Provider Data: IQVIA, Proprietary
 - i. Deactivated Providers List: NPPES, Publicly Available

- b. Population Data: ACS via IPUMS, Publicly Available
- 5. **Data release:**
 - a. Provider Data: IQVIA, purchased December 2023
 - i. Deactivated Providers List: NPPES, released November 11, 2023
 - b. Population Data: ACS via IPUMS, [released December 13, 2022](#)

Primary Care Physicians over 60

Primary Care Physicians over 60, New York	
Year	Total
2023	35.07

- 1. **Date Downloaded:**
 - a. Provider Data: IQVIA, December 4, 2023
 - i. Deactivated Providers List: NPPES, November 13, 2023
- 2. **Description of metric:** Percentage of physicians (MDs/DOs) who practice in primary care over 60.
 - a. Numerator and Exclusions: MD/DOs over the age of 60.
 - i. *NPs and PAs excluded due to missing data for year of birth*
 - b. Denominator and Exclusions: Total number of MD/DOs
 - i. *NPs and PAs excluded due to missing data for year of birth*
 - c. **Stratified by:** State (New York), County ***Note: County level data are available, not shown here.***
 - d. **Imputation Methods:** $\left(\frac{\text{number of PCPs age 60+}}{\text{total number of PCPs}} \right) \times 100$
- 3. **Data source and status:**
 - a. Provider Data: IQVIA
 - i. Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
- 4. **Data cost:**
 - a. Provider Data: IQVIA, Proprietary
 - i. Deactivated Providers List: NPPES, Publicly Available
- 5. **Data release:**
 - a. Provider Data: IQVIA, purchased December 2023
 - i. Deactivated Providers List: NPPES, released November 11, 2023

Primary Care Providers Accepting Medicaid

Primary Care Providers Accepting Medicaid, New York	
Year	Total
2023	79.9

1. **Date Downloaded:**
2. **Description of metric:** Percent of primary care providers accepting Medicaid payments. Providers were counted as primary care providers if their self-designated primary care specialty is one of the following: family medicine/general practice, internal medicine, preventative medicine, internal medicine/pediatrics, pediatrics or geriatric medicine.
 - a. **Numerator and Exclusions:** Number of PCPs accepting Medicaid payments
 - b. **Denominator and Exclusions:** Total number of PCPs
 - c. **Stratified by:** State (New York), County **Note:** *County level data are available, not shown here.*
 - d. **Imputation Methods:** $\left(\frac{\text{number of PCPs accepting Medicaid payments}}{\text{total number of PCPs}} \right) \times 100$
3. **Data source and status:**
 - a. Provider Data: IQVIA
 - i. Deactivated Providers List: [National Plan and Provider Enumeration System \(NPPES\) NPI Deactivation File](#)
 - b. Medicaid Acceptance Data: [CMS Doctors and Clinicians national downloadable file](#)
4. **Data cost:**
 - a. Provider Data: IQVIA, Proprietary
 - i. Deactivated Providers List: NPPES, Publicly Available
 - b. Medicaid Acceptance Data: CMS Doctors and Clinicians national downloadable file, Publicly Available
5. **Data release:**
 - a. Provider Data: IQVIA, purchased December 2023
 - i. Deactivated Providers List: NPPES, released November 11, 2023
 - b. Medicaid Acceptance Data: CMS Doctors and Clinicians national downloadable file, November 16, 2023

Access Metrics

Avoided Care Due to Cost

Delayed care by race and Hispanic ethnicity, New York						
Year	Total	Asian	Black	Hispanic	Multi-Racial	White
2022	9.8	10.5	9.4	20.5	12.3	6

1. **Date Downloaded:** March 2024
2. **Description of metric:** Percentage of adults in the past 12 months when they needed to see a doctor but could not because of cost in New York.
 - a. **Stratified by:** State (New York), Race, and Hispanic Ethnicity
3. **Data source and status:** [Explore Avoided Care Due to Cost in the United States | AHR \(americashealthrankings.org\)](https://www.aahr.org/american-health-rankings/)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2022 and released in December 2023.
6. **Validator and Source:** CDC, Behavioral Risk Factor Surveillance System, 2022.
7. **Rationale:** This metric captures how high cost of healthcare can hinder accessibility. Avoiding care can be detrimental towards individual health due to unnecessary complications, hospitalizations, and higher costs. When aggregated by race, this metric is crucial for identifying and addressing disparities in healthcare access.
8. **Rationale Citation:** Smith, Kyle T., Denise Monti, Nageen Mir, Ellen Peters, Renuka Tipirneni, and Mary C. Politi. 2018. "Access Is Necessary but Not Sufficient: Factors Influencing Delay and Avoidance of Health Care Services." MDM Policy & Practice 3 (1): 238146831876029. <https://doi.org/10.1177/2381468318760298>.

Usual Source of Care

Usual source of care, New York	
Year	Total
2021	85

1. **Date Downloaded:**
2. **Description of metric:** Age-adjusted percentage of New York residents 18 years and older who have a regular health care provider they can contact when they have a health problem.
 - a. **Stratified by:** State (New York). Note: County level data is included in the supplementary data table.
3. **Data source and status:** [New York State Community Health Indicator Reports Dashboard \(ny.gov\)](https://www.ny.gov/new-york-state-community-health-indicator-reports-dashboard)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2021 and released in November 2022.
6. **Validator and Source:** NYS Expanded Behavioral Risk Factor Surveillance System, 2021.

7. **Rationale:** Having a consistent source of care enhances healthcare access and increase the likelihood of adults receive recommended screening and prevention services. A primary care provider acting as the usual source of care is pivotal for better access and quality services by offering integrated care and building lasting patient relationships.
8. **Rationale Citation:** Blewett, Lynn A, Pamela T Johnson, Brian R Lee, and Peter B Scal. 2008. "When a Usual Source of Care and Usual Provider Matter: Adult Prevention and Screening Services." *Journal of General Internal Medicine* 23 (9): 1354–60. <https://doi.org/10.1007/s11606-008-0659-0>.

Potentially Preventable Hospitalization Rate

Potentially preventable hospitalization rate by race and Hispanic ethnicity, New York					
Year	Total	Asian/Pacific Islander	Black	Hispanic	White
2018-2020	117.6	45.1	200.1	124.8	90.8

1. **Date Downloaded:** November 2023
2. **Description of metric:** The number of potentially preventable hospitalizations per 10,000 population aged 18+ years. The Prevention Quality Indicators (PQIs) are a set of measures developed by the federal Agency for Healthcare Research and Quality (AHRQ) for use in assessing the quality of outpatient care for "ambulatory care sensitive conditions" (ACSCs). This indicator is defined as the combination of the 10 PQIs that pertain to adults: (1) Short-term Complication of Diabetes (2) Long-term Complication of Diabetes (3) Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults (4) Hypertension (5) Heart Failure (6) Community-Acquired Pneumonia (7) Urinary Tract Infection (8) Uncontrolled Diabetes (9) Asthma in Younger Adults (10) Lower-Extremity Amputation Among Patients with Diabetes. Because the PQIs estimate the number of potentially avoidable hospital admissions, a lower rate is desirable. The rate is adjusted for age.
 - a. **Stratified by:** Race, Ethnicity, and State (New York)
3. **Data source and status:** [New York State Health Indicators by Race/Ethnicity, 2018-2020 \(ny.gov\)](https://www.health.ny.gov/statistics/indicators/race_ethnicity/2018-2020/)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2020 and released in January 2023.
6. **Validator and Source:** New York State Department of Health
7. **Rationale:** This metric reflects on the quality of outpatient care in New York State. Lower preventable hospitalization rates signify better access to preventive services, reducing unnecessary hospitalizations, complications, and healthcare costs. By stratifying by race, we can pinpoint and rectify disparities in healthcare access and quality.
8. **Rationale Citation:** Nyweide, David J., Denise L. Anthony, Julie P. W. Bynum, Robert L. Strawderman, William B. Weeks, Lawrence. P. Casalino, and Elliott S. Fisher. 2013. "Continuity of Care and the Risk of Preventable Hospitalization in Older Adults." *JAMA Internal Medicine* 173 (20). <https://doi.org/10.1001/jamainternmed.2013.10059>.

Pediatric Preventable Hospitalization Rate

Preventable hospitalization rate among children ages 6-17 years old, New York	
Year	Total
2020	97.7

1. **Date Downloaded:** January 2024
2. **Description of metric:** Pediatric Quality Indicators (PDI) overall composite per 100,000 population, ages 6 to 17 years in New York. Includes hospitalizations for one of the following conditions: asthma, diabetes with short-term complications, gastroenteritis, or urinary tract infection.
 - a. **Stratified by:** State (New York)
3. **Data source and status:** [Hospital Inpatient Prevention Quality Indicators \(PDI\) for Pediatric Discharges by Patient Zip Code: Beginning 2009 | State of New York \(ny.gov\)](https://www.ny.gov/hospital-inpatient-prevention-quality-indicators-pdi-for-pediatric-discharges-by-patient-zip-code-beginning-2009)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2020 and released in January 2023.
6. **Validator and Source:** New York State Department of Health
7. **Rationale:** This metric highlight areas for improvement in pediatric healthcare access and quality. Lower rates indicate better access to preventive pediatric care, reducing unnecessary hospitalizations, complications, and healthcare costs.
8. **Rationale Citation:** Flores, G., M. Abreu, C. E. Chaisson, and D. Sun. 2003. "Keeping Children out of Hospitals: Parents' and Physicians' Perspectives on How Pediatric Hospitalizations for Ambulatory Care-Sensitive Conditions Can Be Avoided." Official Journal of the American Academy of Pediatrics 112 (5): 1021-30. <https://doi.org/10.1542/peds.112.5.1021>.

Preventable Emergency Department Visits

Potentially avoidable emergency department visits ages 18-64 among employer coverage enrollees, New York	
Year	Total
2021	134

1. **Date Downloaded:** November 2023
2. **Description of metric:** Potentially avoidable ED visits ages 18-64, per 1,000 employer coverage enrollees in New York. Potentially avoidable emergency department (ED) visits are those that, based on diagnoses recorded during the visit and the health care service the patient received, were considered to be either nonemergent (care was not needed within 12 hours), or emergent (care needed within 12 hours) but that could have been treated safely and effectively in a primary care setting. This definition excludes any ED visit that resulted in an admission, as well as ED visits where the level of care provided in the ED was clinically indicated.
 - a. **Stratified by:** State (New York)

3. **Data source and status:** [Potentially Avoidable ED Visits Data | Commonwealth Fund](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2021. The release date is unknown.
6. **Validator and Source:** Data from Merative MarketScan (analysis by M.Chernew & A. Hicks, Harvard Medical School). Source: The Commonwealth Fund
7. **Rationale:** This metric assesses the number of potentially avoidable emergency visits among adults aged 18-64 with employer coverage in New York. It highlights the accessibility of primary care services and the need for timely interventions, aiming to reduce preventable ED visits and associated healthcare expenditures.
8. **Rationale Citation:** Johnson, Pamela Jo, Neha Ghildayal, Andrew C. Ward, Bjorn C. Westgard, Lori L. Boland, and Jon S. Hokanson. 2012. "Disparities in Potentially Avoidable Emergency Department (ED) Care: ED Visits for Ambulatory Care Sensitive Conditions." Medical Care 50 (12): 1020–28.
https://www.jstor.org/stable/41714628?casa_token=Vjb6ygRBBtIAAAAA%3A5M9oEuvNg95OG8BeeMp7v39d4gZuYFp9B38o1B08q0r7bEBrbqOEMVD1l5q29ay4pwfnUL40eakffLmNg1_i1FGkaw7oLhdDEEoAQgO3BzlieE_3yY&seq=1.

Potentially avoidable emergency department visits ages among Medicare beneficiaries ages 65 and older, New York	
Year	Total
2021	136.6

1. **Date Downloaded:** March 2024
2. **Description of metric – employer coverage:** Potentially avoidable ED visits are those that, based on diagnoses recorded during the visit and the health care service the patient received, were considered to be either nonemergent (care was not needed within 12 hours), or emergent (care needed within 12 hours) but that could have been treated safely and effectively in a primary care setting. This definition excludes any ED visit that resulted in an admission, as well as ED visits where the level of care provided in the ED was clinically indicated. This approach uses the New York University Center for Health and Public Service Research emergency department algorithm developed by John Billings, Nina Parikh, and Tod Mijanovich (see: Emergency Room Use — The New York Story, Commonwealth Fund, Nov. 2000). Presented as a rate of ED visits per 1,000 fee-for-service Medicare beneficiaries age 65 and older.
 - a. **Stratified by:** State (New York)
3. **Data source and status:** [Potentially avoidable ED visits age 65 and older, per 1,000 Medicare beneficiaries | Commonwealth Fund](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2021. The release date is unknown.
6. **Validator and Source:** CMS Limited Data Set (LDS) (analysis by Westat and Center for Evidence Based Policy at Oregon Health and Sciences University). Source: The Commonwealth Fund
7. **Rationale:** This metric assesses the number of potentially avoidable emergency visits among adults 65 and over with Medicare coverage in New York. It highlights the accessibility of primary care services and the need for timely interventions, aiming to reduce preventable ED visits and associated healthcare expenditures.

8. **Rationale Citation:** Johnson, Pamela Jo, Neha Ghildayal, Andrew C. Ward, Bjorn C. Westgard, Lori L. Boland, and Jon S. Hokanson. 2012. "Disparities in Potentially Avoidable Emergency Department (ED) Care: ED Visits for Ambulatory Care Sensitive Conditions." *Medical Care* 50 (12): 1020–28.
https://www.jstor.org/stable/41714628?casa_token=Vjb6ygRBBtIAAAAA%3A5M9oEuvNg95OG8BeeMp7v39d4qZuYFp9B38o1B08q0r7bEBrbqOEMVD1l5q29ay4pwfnUl40eakffLmNg1_i1FGkaw7oLhdDEEoAQgO3BzilieE_3yY&seq=1.

Performance Metrics

Adequate Prenatal Care

Adequate prenatal care by race and Hispanic ethnicity, New York					
Year	Total	Asian/Pacific Islander	Black	Hispanic	White
2018-2020	75.1	77.4	67.7	69.8	79.6

1. **Date Downloaded:** November 2023
2. **Description of metric:** Percentage of births with adequate prenatal care from the Adequacy of Prenatal Care Utilization Index (APNCU) in New York. Adequate prenatal care is the number of expected prenatal visits for each pregnancy - adjusted from 14 (expected number of visits over 40 week pregnancy) given the date prenatal care began and the date of delivery.
 - a. **Stratified by:** State (New York), Race, and Hispanic Ethnicity
3. **Data source and status:** [New York State Health Indicators by Race/Ethnicity, 2018-2020 \(ny.gov\)](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the years 2018-2020 and released in 2021.
6. **Validator and Source:** New York State Department of Health
7. **Rationale:** This metric provides a insights onto the the overall of both infants and expecting mothers in a population. This metric is related to performance by evaluating the efficiency and quality of healthcare services across diverse demographics, aiming for optimal health outcomes and addressing disparities in prenatal care access.
8. **Rationale citation:** Partridge, Sarah, Jacques Balayla, Christina Holcroft, and Haim Abenheim. 2012. "Inadequate Prenatal Care Utilization and Risks of Infant Mortality and Poor Birth Outcome: A Retrospective Analysis of 28,729,765 U.S. Deliveries over 8 Years." *American Journal of Perinatology* 29 (10): 787–94. <https://doi.org/10.1055/s-0032-1316439>.

Core Preventative Services (Adults 65+)

Core preventative services in adults 65+ by gender, New York		
Year	Males	Females
2021	45.9	39.5

1. **Date Downloaded:** November 2023
2. **Description of metric:** Males: Older adults aged ≥ 65 years in New York who are up to date on a core set of clinical preventive services: Flu shot last year, PPV shot ever, Colorectal cancer screening. Females: Older adults aged ≥ 65 years in New York who are up to date on a core set of clinical preventive services: Flu shot last year, PPV shot ever, Colorectal cancer screening, and a mammogram
 - a. **Stratified by:** State (New York), Gender.
3. **Data source and status:** Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health. [BRFSS Prevalence & Trends Data](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2021 and released in 2023.
6. **Validator and Source:** Centers for Disease Control and Prevention
7. **Rationale:** This metric is essential in the performance section as it reflects the efficiency and quality of healthcare services in New York State by promoting preventive care, which is crucial for achieving ideal health outcomes, particularly among older adult males who may be at higher risk for complications from certain health conditions such as the flu and various types of cancers.
8. **Rationale Citation:** Shenson, Douglas, Mary Adams, Julie Bolen, Karen Wooten, Juliana Clough, Wayne H Giles, and Lynda Anderson. 2012. "Developing an Integrated Strategy to Reduce Ethnic and Racial Disparities in the Delivery of Clinical Preventive Services for Older Americans." American Journal of Public Health 102 (8): e44–50. <https://doi.org/10.2105/ajph.2012.300701>.

Early Childhood Vaccination

Early childhood vaccination, New York	
Year	Total
2022	61.0

1. **Date Downloaded:** April 2024
2. **Description of metric:** Percentage of vaccine coverage among children ages 24–35 months as of September 2023 in New York State. It assesses the percentage of children who completed a 7-vaccine series before the age of 24 months; this series protects against 11 illnesses, including measles, mumps, polio, and chickenpox.
 - a. **Stratified by:** State (New York), County *Note: County level data are available, not shown here.*
3. **Data source and status:** [Prevention Agenda Tracking Dashboard \(ny.gov\)](#)

4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2022 and released in September 2023.
6. **Validator and Source:** New York State Immunization Information System
7. **Rationale:** This metric is crucial in understanding healthcare performance in New York State as it reflects the effectiveness of vaccination programs in promoting childhood immunization and preventing the spread of infectious diseases, thus contributing to improved public health outcomes and highlighting the success of primary health initiatives.
8. **Rationale citation:** Cataldi, Jessica R., Mattie E. Kerns, and Sean T. O’Leary. 2020. “Evidence-Based Strategies to Increase Vaccination Uptake.” *Current Opinion in Pediatrics* 32 (1): 151–59. <https://doi.org/10.1097/mop.0000000000000843>.

Hypertension Control

Hypertension control, New York	
Year	Adults 18+ with Hypertension
2021	78.3

1. **Date Downloaded:** November 2023
2. **Description of metric:** Model-based estimate for crude prevalence of taking medicine for high blood pressure control among adults aged ≥ 18 years with high blood pressure in New York.
 - a. **Stratified by:** State (New York)
3. **Data source and status:** [PLACES: County Data \(GIS Friendly Format\), 2023 release | Data | Centers for Disease Control and Prevention \(cdc.gov\)](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2021 and released in 2023.
6. **Validator and Source:** Centers for Disease Control and Prevention
7. **Rationale:** Hypertension is a major contributor to mortality and healthcare costs in the U.S. and is linked to other leading causes of mortality and costly health determinants such as unhealthy diet, obesity, and food insecurity. This metric provides crucial insights into primary health performance by monitoring medication adherence, a key factor in controlling hypertension and preventing associated complications.
8. **Rationale citation:** MacLeod, Kara E., Zhiqiu Ye, Bruce Donald, and Guijing Wang. 2022. “A Literature Review of Productivity Loss Associated with Hypertension in the United States.” *Population Health Management* 25 (3). <https://doi.org/10.1089/pop.2021.0201>.

Health Outcomes Metrics

Avoidable Premature Mortality

Avoidable premature mortality by race and Hispanic ethnicity, New York					
Year	Total	Asian American and Native Hawaiian/Pacific Islander	Black	Hispanic	White
2020-2021	267.8	165.4	458.5	290.1	236.7

1. **Date Downloaded:** November 2023
2. **Description of metric:** Number of age-adjusted deaths before age 75 per 100,000 population that resulted from causes that can be mainly avoided through effective public health and primary prevention interventions (i.e., before the onset of diseases/injuries, to reduce incidence), termed “preventable” mortality; and timely and effective health care interventions, including secondary prevention and treatment (i.e., after the onset of diseases, to reduce case-fatality), termed “treatable” mortality. Avoidable deaths include causes such as diabetes; heart disease; appendicitis; certain treatable and preventable cancers; maternal mortality; COVID-19; measles, HIV/AIDS, and other infectious diseases; personal injuries; and alcohol- and drug-related mortality. Based on the methodology and categories developed by the Organization for Economic Co-operation and Development (OECD) and Eurostat, as published in Avoidable mortality: OECD/Eurostat lists of preventable and treatable causes of death (January 2022 version). Two years of data are combined to ensure adequate sample size for state-level rates.
 - a. **Stratified by:** Race, State (New York)
3. **Data source and status:** CDC National Vital Statistics System (NVSS): Restricted Use Mortality Microdata [The Commonwealth Fund](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the years 2020-2021 and released in November 2022.
6. **Validator and Source:** CDC National Vital Statistics System
7. **Rationale:** This metric provides valuable insights into the effectiveness of preventive measures and healthcare interventions to reduce early mortality, highlighting areas for improvement in public health initiatives and healthcare delivery systems.
8. **Rationale citation:** Avoidable mortality: OECD/Eurostat lists of preventable and treatable causes of death . 2022. “Avoidable Mortality: OECD/Eurostat Lists of Preventable and Treatable Causes of Death .” OECD. January 2022. <https://www.oecd.org/health/health-systems/Avoidable-mortality-2019-Joint-OECD-Eurostat-List-preventable-treatable-causes-of-death.pdf>.

Low Birthweight

Low birthweight percentage by race and Hispanic ethnicity, New York					
Year	Total	Asian/Pacific Islander	Black	Hispanic	White
2018-2020	8.1	8.7	13.1	8.5	6.2

1. **Date Downloaded:** November 2023
2. **Description of metric:** Percentage of low birth weights (under 5 pounds, 8 ounces) in New York from 2018-2020.
3. **Stratified by:** Race, Ethnicity, and State (New York).
4. **Data source and status:** [New York State Health Indicators by Race/Ethnicity, 2018-2020 \(ny.gov\)](https://www.health.ny.gov/statistics/indicators/race_ethnicity/2018-2020/)
5. **Data cost:** Publicly available
6. **Data release:** Data was collected in the year 2020 and released in January 2023.
7. **Validator and Source:** New York State Department of Health
8. **Rationale:** Low birthweight is a leading cause of infant mortality and is associated with various adverse health outcomes, making this metric essential for understanding the overall health status of newborns and the effectiveness of prenatal care services in the state. This metric underscores the importance of addressing factors influencing birth outcomes and highlights the appropriateness dimension of access to quality healthcare services.
9. **Rationale citation:** Pollock, Elizabeth A., Keith P. Gennuso, Marjory L. Givens, and David Kindig. 2021. "Trends in Infants Born at Low Birthweight and Disparities by Maternal Race and Education from 2003 to 2018 in the United States." BMC Public Health 21 (1). <https://doi.org/10.1186/s12889-021-11185-x>.

Maternal Mortality

Maternal mortality rate by race and Hispanic ethnicity, New York					
Year	Total	Asian	Black	Hispanic	White
2017-2021	19.8	15.5	65.2	12.6	15.1

1. **Date Downloaded:** January 2024.
2. **Description of metric:** The number of deaths related to or aggravated by pregnancy (excluding accidental or incidental causes) occurring within 42 days of the end of a pregnancy per 100,000 live births in New York.
 - a. **Stratified by:** State (New York)
3. **Data source and status:** [Explore Maternal Mortality in New York | AHR \(americashealthrankings.org\)](https://www.americashealthrankings.org/explore/maternal-mortality/new-york)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the years 2016-2020 and released in April 2022.

6. **Validator and Source:** CDC National Vital Statistics System
7. **Rationale:** This metric reflects the effectiveness of prenatal and maternal healthcare services, and addressing it is essential for improving maternal health and reducing preventable deaths during childbirth, highlighting areas of improvement in the state's healthcare system.
8. **Rationale citation:** Collier, Ai-ris Y., and Rose L. Molina. 2019. "Maternal Mortality in the United States: Updates on Trends, Causes, and Solutions." *NeoReviews* 20 (10): 561–74. <https://doi.org/10.1542/neo.20-10-e561>.

Uncontrolled Diabetes

Uncontrolled diabetes among Medicaid Managed Care patients, New York	
Year	Total
2022	33.0

1. **Date Downloaded:** November 2023
2. **Description of metric:** The percentage of members 18–75 years of age with diabetes (types 1 and 2) whose hemoglobin A1c (HbA1c) was at >9.0% during the measurement year
 - a. **Stratified by:** State (New York)
3. **Data source and status:** [Quality Assurance Reporting Requirements: Beginning 2008 | State of New York \(ny.gov\)](#)
4. **Data cost:** Publicly available
5. **Data release:** Data was collected in the year 2022 and released in 2023.
6. **Validator and Source:** New York State Department of Health
7. **Rationale:** Diabetes is one of the top causes of death and contributes significantly to healthcare expenses in the United States. Uncontrolled diabetes increases the risk of other serious health issues like stroke, heart disease, and kidney disease. Also, it is an indicator of other preventable health problems such as food insecurity, poor diet, and obesity, emphasizing the importance of effective management and prevention strategies.
8. **Rationale Citation:** Cannon, Anthony, Yehuda Handelsman, Michael Heile, and Michael Shannon. 2018. "Burden of Illness in Type 2 Diabetes Mellitus." *Journal of Managed Care & Specialty Pharmacy* 24 (9-a Suppl): S5–13. <https://doi.org/10.18553/jmcp.2018.24.9-a.s5>.

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Primary Care County Data Explorer Metrics by County, Data Sources

Access Metrics

Metric	Data Year	Source
Age-adjusted diabetes hospitalization rate per 10,000 (primary diagnosis)	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Age-adjusted percentage of adults who did not receive medical care because of cost	2021	New York State Expanded Behavioral Risk Factor Surveillance System (BRFSS)
Age-adjusted total emergency department visit rate per 10,000	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Age-adjusted total hospitalization rate per 10,000	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Asthma hospitalization rate per 10,000 - Aged 0-17 years	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Current lack of health insurance among adults aged 18-64 years	2022	NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)
PCPs accepting Medicaid	2023	IQVIA
Percentage of adults aged 18-64 years with health insurance	2020	US Census Bureau, Small Area Health Insurance Estimates
Percentage of children (aged 3 - 21 years) who had at least one well-care visit in government sponsored insurance programs	2020	NYSDOH Office of Quality and Patient Safety
Percentage of children aged <19 years with health insurance	2020	US Census Bureau, Small Area Health Insurance Estimates
Percentage of children who had 2+ well-child visits during 15-30 months of life in government sponsored insurance programs	2020	NYSDOH Office of Quality and Patient Safety

Percentage of children who had 6+ well-child visits in the first 15 months of life in government sponsored insurance programs	2020	NYSDOH Office of Quality and Patient Safety
Potentially preventable diabetes short-term complications hospitalization rate per 10,000 - Aged 18 years and older	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Potentially preventable heart failure hospitalization rate per 10,000 - Aged 18 years and older	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Potentially preventable hypertension hospitalization rate per 10,000 - Aged 18 years and older	2018-2020	Statewide Planning and Research Cooperative System (SPARCS)
Usual Source of Care	2021	NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)
Visits to doctor for routine checkup within the past year among adults	2022	NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)

Performance Metrics

Metric	Data Year	Source
Colorectal cancer screening among adults aged 45-75 years	2022	NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)
Early Childhood Vaccination	2020	Prevention Agenda Tracking Dashboard (ny.gov) 2022 Federal Office of Rural Health Policy Non-Metro Counties and Eligible Census Tracts in Metropolitan Counties Datafile.
Mammography use among women aged 50-74 years	2022	NYS Medicaid and Child Health Plus
Percentage of births with adequate prenatal care	2018-2020	Vital Statistics Unit, Bureau of Health Informatics Division of Information and Statistics Office of Quality and Patient Safety

Taking medicine to control high blood pressure among adults with high blood pressure	2021	NYS Expanded Behavioral Risk Factor Surveillance System (BRFSS)
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Health Outcomes Metrics

Metric	Data Year	Source
Age-adjusted diabetes mortality rate per 100,000	2018-2020	Vital Statistics Unit, Bureau of Health Informatics Division of Information and Statistics Office of Quality and Patient Safety
Diseases of the heart premature death (aged 35-64 years) mortality rate per 100,000	2018-2020	Vital Statistics Unit, Bureau of Health Informatics Division of Information and Statistics Office of Quality and Patient Safety
Maternal mortality rate per 100,000 live births	2018-2020	NYS Vital Statistics Event Registry as of November 2022
Mortality rate per 1,000 live births - Infant (<1 year)	2018-2020	NYS Vital Statistics Event Registry as of November 2022
Percentage low birthweight (<2.5 kg) births	2018-2020	Vital Statistics Unit, Bureau of Health Informatics Division of Information and Statistics Office of Quality and Patient Safety
Percentage premature deaths (aged less than 75 years)	2018-2020	Vital Statistics Unit, Bureau of Health Informatics Division of Information and Statistics Office of Quality and Patient Safety

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