

Primary Care in Massachusetts

Technical Appendix
May 2024

Primary Care Dashboard

TECHNICAL APPENDIX

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Context Measures

Percentage of Massachusetts Residents Who Have a PCP as Part of Plan Design

Insurance Category	Year	% of MA Residents Who Have a PCP as Part of Plan Design
Commercial	2020	49.9%
	2021	48.6%

1. **Date:** 8/29/2023
2. **Data/Measurement and submission years:** Data for each calendar year is collected 9 months after the end of the year, and all data was published in March 2023.
3. **Description of metric:** The percentage of Massachusetts residents who have a primary care practitioner (PCP) as a part of their plan design. This measure captures all members enrolled in commercial health plans. Product types reflected under commercial health plans with members who select a PCP as part of their plan design include HMO, POS, PPO, and other lines of business.

PCP Indicator	Description
1	Data for members who select a PCP as part of plan design.
2	Data for members who are attributed to a PCP during reporting period pursuant to payer-provider risk contract.
3	Data for members who are attributed to a PCP by payer's own attribution methodology.
4	Data for members who are not attributed to a PCP.

- a. **Numerator & exclusions:** Sum of member months reported as having a primary care physician as part of their plan design based on CHIA's PCP indicator (PCP type 1).
 - b. **Denominator & exclusions:** Sum of all members months in the stratified population reflecting all primary care practitioner types (PCP type 1-4).
 - c. **Stratifier:** Data stratified by year, insurance category, and primary care practitioner indicator which is used to attribute members to a specific physician group.
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The Center for Health Information and Analysis (CHIA) [Annual Report on the Performance of the Massachusetts Health Care System](#)
 5. **Data cost:** Publicly available.
 6. **Data release:** Data is reported to CHIA annually in September for the most recent calendar year. Data is published as part of CHIA's Annual Report each spring.
 7. **Validator & Source:** N/A

Infant Mortality per 1,000 Live Births in Massachusetts Stratified by Race/Ethnicity

Year and Race/Ethnicity	Number of Infant Deaths	Mortality Rate ³
2020 Statewide Total¹	263	4.0
White, non-Hispanic	111	2.9
Black, non-Hispanic	51	7.3
Hispanic	61	4.3
Asian, non-Hispanic	13	2.0
Other ²	12	15.3
2021 Statewide Total	228	3.3
White, non-Hispanic	94	2.4
Black, non-Hispanic	52	7.4
Hispanic	55	3.8
Asian/PI, non-Hispanic ⁴	14	2.3
American Indian/Alaska Native, non-Hispanic ⁵	0	0

1. **Date:** 8/14/2023
2. **Data/Masurement and submission years:** [The Department of Public Health](#) measures vital statistics data annually: Data is available for 2009 through 2020. 2021 data is preliminary and subject to change.
3. **Description of metric:** Trends in Infant Mortality (less than one year of age) per 1,000 live births by Race and Hispanic Ethnicity, Massachusetts: 2020- 2021
 - a. **Numerator & exclusions:** Massachusetts resident newborn deaths under one year of age acquired from vital statistics.
 - b. **Denominator & exclusions:** Population estimates of births gathered from census data with the 2020 and 2021 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file.
 - c. **Stratifier:** Data stratified by state (Massachusetts) and race/ethnicity.
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [The Registry of Vital Records and Statistics, Massachusetts Department of Public Health, 2023](#)
5. **Data cost:** Publicly available.
6. **Data release:** The Department of Public Health, Registry of Vital Records and Statistics releases data annually.
7. **Validator & Source:** [March of Dimes](#) reported 2017-2019 infant mortality average rates by race/ethnicity in Massachusetts. Hispanic: 5.0 per 1,000 live births, White: 2.8 per 1,000 births, Black: 7.4 per 1,000 births, Asian/Pacific Islander: 2.5 per 1,000 live births.

¹ Infant deaths with unknown race are included for total calculations. ² “Other” category includes American Indian and Other Races. ³ All rates are expressed as per 1,000 live births. ⁴Asian/PI, non-Hispanic category includes pacific islander in 2021 data. ⁵American Indian/Alaska Native, non-Hispanic category included in 2021 data.

Child Mortality per 100,000 Massachusetts Population Stratified by Race/Ethnicity

Year	Age Group 1-8	
	# Deaths	Age-Spec Rate
2020 Statewide Age Total	39	6.7
White, non-Hispanic	15	4.7
Black, non-Hispanic	7	14.3
Hispanic	12	10.0
Asian/PI, non-Hispanic	3	*
2021 Statewide Age Total	46	7.9
White, non-Hispanic	22	6.9
Black, non-Hispanic	5	10.2
Hispanic	13	10.8
Asian/PI, non-Hispanic	4	*
American Indian/Alaska Native non-Hispanic ¹	1	*

- Date:** 8/14/2023
- Data/Masurement and submission years:** [The Department of Public Health](#) measures vital statistics data annually. Data is available for 2009 through 2020. 2021 data is preliminary and subject to change.
- Description of metric:** Number of deaths and age-specific mortality rates (per 100,000 residents) by race group and age group for Massachusetts and residents ages 1 to 8, Massachusetts residents, 2020 and 2021.
 - Numerator & exclusions:** Total deaths in each age group by race/ethnicity
 - Denominator & exclusions:** Total population of Massachusetts residents by age group and race/ethnicity.
 - Stratifier:** Age group, race/ethnicity, and year
 - Imputation method:** Compiled by the Massachusetts Department of Health Registry of Vital Records and Statistics.
 - Weighting Scheme:** N/A
 - Risk Adjusted:** N/A
- Data source & status:** [The Registry of Vital Records and Statistics, Massachusetts Department of Public Health](#), 2023.
- Data cost:** N/A
- Data release:** The Department of Public Health, Registry of Vital Records and Statistics, releases data annually.
- Validator & source:** [America's Health Rankings](#) reported that the rate of child mortality from 2018-2020 in Massachusetts for ages 1 to 19 years old was 14.3 per 100,000 children.

¹American Indian/Alaska Native, non-Hispanic category included in 2021 data.

Note: * Rate is suppressed due to small numbers. Asian/PI, non-Hispanic and American Indian/ Alaska Native, non-Hispanic are not included on this table for 2020 and 2021 due to the instability of small numbers in these calculations.

Maternal Mortality per 100,000 Live Births in Massachusetts

Year	Number of Maternal Deaths	Mortality Rate
2020 Statewide Total	7	10.5

1. **Date:** 12/6/2023
2. **Data/Measurement and submission years:** [The Department of Public Health](#), Statewide 2020 maternal mortality.
3. **Description of metric:** Number of pregnancy-related deaths per Massachusetts resident live births in 2020. Mortality rate reflects per 100,000 Massachusetts live births.
 - a. **Numerator & exclusions:** Massachusetts resident pregnancy-related deaths (i.e. the death of a woman while pregnant or within one year of termination of pregnancy, from any cause related to or aggravated by her pregnancy or its management, but not from accidental or incidental causes).
 - b. **Denominator & exclusions:** Massachusetts resident live births.
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [The Department of Public Health](#).
5. **Data cost:** Requested data.
6. **Data release:** Not released
7. **Validator & Source:** [CDC maternal mortality 2018-2021](#) rate was 15.3 per 100,000 live births in Massachusetts.

Male Life Expectancy Stratified by Race/Ethnicity

Male Years of Life Remaining ¹ by Race, Hispanic Ethnicity ² , and Gender, Massachusetts						
Year	White, non-Hispanic Male	Black, non-Hispanic Males	Hispanic Males	Asian/PI non-Hispanic Males ³	American Indian/Alaska Native non-Hispanic Males ⁴	All Males
2020	77.0	72.8	76.0	N/A	N/A	76.7
2021	77.1	74.2	75.9	84.1	72.1	77.2

- Date:** 8/14/2023
- Data/Measurement and submission years:** [The Department of Public Health](#) measures vital statistics data annually: Data is available for 2009 through 2020. 2021 data is preliminary and subject to change.
- Description of metric:** Male life expectancy at birth in years in Massachusetts.
 - Numerator & exclusions:** Life expectancy was calculated using the Greville Abridged Life Table Method. Parameters are estimated in each equation used to account for sex. An average probability of resident death for any given age group was estimated for the years of life remaining calculation by using the Piecewise Cubic Hermite Interpolating Polynomial (PCHIP) method. The formula used includes values indicating age, probability of dying, number surviving, number dying, person years lived, total number of person-years lived, and expectation of life.
 - Denominator & exclusions:** Population estimates gathered from census data with the 2020 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file.
 - Stratifier:** State (Massachusetts), Race and Hispanic Ethnicity, and Gender
 - Imputation method:** N/A
 - Weighting Scheme:** N/A
 - Risk Adjusted:** N/A
- Data source & status:** [The Registry of Vital Records and Statistics, Massachusetts Department of Public Health, 2023](#)
- Data cost:** Publicly available.
- Data release:** The Department of Public Health, Registry of Vital Records and Statistics, releases data annually.
- Validator & source:** The 2020 life expectancy for males at birth in Massachusetts is 76.4 years while life expectancy for males in Massachusetts at age 65 is 17.6 years. Source: [National Vital Statistics Reports](#). U.S. State Life Tables, 2020 Volume 71, Number 2. Tables A and B.

¹Years of life remaining were calculated by using the Greville Abridged Life Table Method. ²The population estimates used to stratify by race and Hispanic ethnicity were from the 2019 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file. ³Asian/PI, non-Hispanic category includes Pacific Islander in 2021 data. ⁴American Indian/Alaska Native, non-Hispanic category included in 2021 data.

Note: Asian/PI, non-Hispanic and American Indian/Alaska Native, non-Hispanic are not included on this table for 2020 due to the instability of small numbers in these calculations.

Female Life Expectancy Stratified by Race/Ethnicity

Female Years of Life Remaining ¹ by Race, Hispanic Ethnicity ² , and Gender, Massachusetts						
Year	White, non-Hispanic Females	Black, non-Hispanic Females	Hispanic Females	Asian/PI non-Hispanic Females ³	American Indian/Alaska Native non-Hispanic Females ⁴	All Females
2020	81.8	79.4	84.1	N/A	N/A	81.9
2021	82.7	80.6	84.6	88.3	75.1	83.0

- Date:** 8/14/2023
- Data/Masurement and submission years:** [The Department of Public Health](#) measures vital statistics data annually: Data is available for 2009 through 2020. 2021 data is preliminary and subject to change.
- Description of metric:** Female life expectancy at birth in years in Massachusetts
 - Numerator & exclusions:** Life expectancy was calculated using the Greville Abridged Life Table Method. Parameters are estimated in each equation used to account for sex. An average probability of resident death for any given age group was estimated for the years of life remaining calculation by using the Piecewise Cubic Hermite Interpolating Polynomial (PCHIP) method. The formula used includes values indicating age, probability of dying, number surviving, number dying, person years lived, total number of person-years lived, and expectation of life.
 - Denominator & exclusions:** Population estimates gathered from census data with the 2020 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file.
 - Stratifier:** State (Massachusetts), Race and Hispanic Ethnicity, and Gender
 - Imputation method:** N/A
 - Weighting Scheme:** N/A
 - Risk Adjusted:** N/A
- Data source & status:** [The Registry of Vital Records and Statistics, Massachusetts Department of Public Health, 2023](#)
- Data cost:** Publicly available.
- Data release:** The Department of Public Health, Registry of Vital Records and Statistics, releases data annually.
- Validator & source:** The 2020 life expectancy for females at birth in Massachusetts is 81.5 years while life expectancy for females in Massachusetts at age 65 is 20.1 years. Source: [National Vital Statistics Reports](#). U.S. State Life Tables, 2020 Volume 71, Number 2. Tables A and B.

¹Years of life remaining were calculated by using the Greville Abridged Life Table Method. ²The population estimates used to stratify by race and Hispanic ethnicity were from the 2019 bridged population file, MARS (Modified Age, Race/Ethnicity, and Sex) file. ³Asian/PI, non-Hispanic category includes pacific islander in 2021 data. ⁴American Indian/Alaska Native, non-Hispanic category included in 2021 data.

Note: Asian/PI, non-Hispanic and American Indian/Alaska Native, non-Hispanic are not included on this table for 2020 due to the instability of small numbers in these calculations.

Percentage of Newborns Who Have Low Birth Weight Stratified by Race/Ethnicity

Year and Race/Ethnicity	Number of Babies with LBW ¹	Percent of Births ²
2020 Statewide Total	4897	7.4
White, non-Hispanic	2374	5.8
Black, non-Hispanic	698	10.1
Hispanic	1148	8.2
Asian/PI, non-Hispanic	518	8.6
Other ³	50	7.3
Unknown	109	10.6
2021 Statewide Total	5176	7.5
White, non-Hispanic	2600	6.5
Black, non-Hispanic	779	11.1
Hispanic	1182	8.2
Asian/PI, non-Hispanic ⁴	482	7.9
American Indian/Alaska Native non-Hispanic ⁴	22	6.6

- Date:** 8/14/2023
- Data/Measurement and submission years:** [The Department of Public Health](#) measures vital statistics data annually. Data is available for 2009 through 2020. 2021 data is preliminary and subject to change.
- Description of metric:** Percentage of Massachusetts resident low birthweight newborns (<2500 grams) by race/ethnicity.
 - Numerator & exclusions:** Massachusetts resident births to newborns weighing less than 2,500 grams. Total percentages for LBW were calculated with only known birthweights.
 - Denominator & exclusions:** Population estimates were derived from calculations completed by the UMASS Donahue Institute (UMDI) and controlled to annual county level Census population estimates.
 - Stratifier:** Massachusetts, low birthweight newborns (<2500 grams), and race/ethnicity.
 - Imputation method:** N/A
 - Weighting Scheme:** N/A
 - Risk Adjusted:** N/A
- Data source & status:** [The Registry of Vital Records and Statistics, Massachusetts Department of Public Health, 2023](#)
- Data cost:** Publicly available.
- Data release:** The Department of Public Health, Registry of Vital Records and Statistics, releases data annually.
- Validator & source:** 7.5% of all live births in Massachusetts were to low birthweight infants in 2021. During 2019-2021 (average), the low birthweight rate in Massachusetts was 12.5% for American Indian/Alaska Native infants, 10.4% for Black infants, 8.4% for Asian/Pacific Islander infants and 6.8% for White infants ([March of Dimes, 2022](#))

¹LBW refers to Low Birth Weight or a birthweight <2,500 grams. ²Percentages are based on the table's column totals. ³“Other” category includes American Indian and Other Races. ⁴Asian/PI, non-Hispanic category includes pacific islander in 2020 and 2021 data. ⁵American Indian/Alaska Native, non-Hispanic category included in 2021 data.

Note: Percentages for detailed birthweight rows (“<500” through “Unknown birthweight”) are calculated based on births including those with unknown birthweight. Percentages for VLBW and LBW rows are calculated based on births with known birthweight only. Singleton and multiple births are included in all table totals.

Avoidable Emergency Department Use

Percent Of MA Residents Who Reported That Their Most Recent Emergency Room Visit in The Past 12 Months Was for a Non-Emergency Condition		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	30.4%
	Black, non-Hispanic	52.4%
	Asian, non-Hispanic	N/A
	Other/multiple races, non-Hispanic	N/A
	Hispanic	39.9%
	Total Population	34.6%
2023	White, non-Hispanic	26.5%
	Black, non-Hispanic	47.9%
	Asian, non-Hispanic	N/A
	Other/multiple races, non-Hispanic	N/A
	Hispanic	51.3%
	Total Population	36.2%

1. **Date:** 3/25/2024
2. **Data/Masurement and submission years:** 2021 and 2023 Massachusetts Health Insurance Survey (MHIS)
3. **Description of metric:** Among residents with at least one Emergency Department (ED) visit in the past 12 months, percent who reported that their most recent ED visit could have been treated by a general doctor if one had been available, by age group and race/ethnicity, 2021 and 2023. For more information, please see the 2023 [Massachusetts Health Insurance Survey \(MHIS\) Methodology Report](#).
 - a. **Numerator & exclusions:** Massachusetts residents with an ED visit over the past 12 months who reported that their most recent ED visit could have been treated by a general doctor if one had been available.
 - b. **Denominator & exclusions:** Massachusetts residents with an ED visit over the past 12 months.
 - c. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents (nonresponse bias), and to address gaps in coverage in the survey frame (coverage bias). Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - d. **Imputation Method:** Missing values for key demographic variables for the target and target's household members replaced through hot-deck imputation procedures.
 - e. **Risk Adjusted:** N/A

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4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
 5. **Data cost:** Publicly available.
 6. **Data release:** Data released biennially.
 7. **Validator & Source:** Massachusetts Health Policy Commission. [Decrease in Potentially Avoidable Emergency Visits Among Children and Adults between March 2019 and September 2021](#). Finding: "Historically, around 30-40% of ED visits in Massachusetts are classified as potentially avoidable visits that could more effectively be cared for in another clinical setting, such as primary care."

Finance Measures

Primary Care Spending Over All Medical Spending

Insurance Category	Year	Total Expenditures ¹	% of Total Expenditures	Per Member Per Month (PMPM)
Commercial	2022	\$995,152,306	6.7%	\$41.6
MassHealth MCO/ACO-A	2022	\$208,096,129	7.5%	\$35.2
Medicare Advantage	2022	\$114,726,206	4.2%	\$46.8

1. **Date:** 07/25/2023
2. **Data/Measurement and submission years:** Calendar Year (CY) 2022 data collected 2023.
3. **Description of metric:** Percentage of primary care spending over all medical spending by insurance category. Primary Care spending as a proportion of total spending is calculated using the Center for Health Information and Analysis's (CHIA) Primary Care and Behavioral Health (PCBH) data, which is collected by CHIA through submissions from payers. Insurance categories include Commercial, MassHealth MCO/ACO-A, and Medicare Advantage.

In this data, Primary Care is defined by Current Procedural Terminology (CPT) codes, along with provider codes. Using these, Primary Care services were defined as:

- Care provided in any setting by a primary care provider in an outpatient or telehealth setting, or in a patient's home or nursing care setting
- Payments made for preventative medicine services like exams, screenings, and counseling by a primary care provider
- Payments made for the administration injections, infusions and vaccines delivered by primary care providers
- Payments made for routine obstetric care including OB/GYN evaluation and management services
- Non-Claims payments made for incentive programs, capitation, risk settlements, care management related to the provision of primary care services.

Primary Care spending is counted after Behavioral Health in order to prevent double-counting. If behavioral health services are provided by primary care providers or in a primary care setting, they were counted toward Behavioral Health expenditures and not primary care expenditures.

- a. **Numerator & exclusions:** Primary Care Expenditures.
 - b. **Denominator & exclusions:** Total Expenditures.
 - c. **Stratifier:** Insurance category.
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The Center for Health Information and Analysis' (CHIA) [Massachusetts Primary Care Expenditures: 2021](#)
 5. **Data cost:** Publicly available.
 6. **Data release:** CY 2021 data released in 2023

7. **Validator & source:** The Milbank Memorial Fund released a scorecard (<https://www.milbank.org/primary-care-scorecard/>) “The Health of US Primary Care: 2024 Scorecard Data Dashboard” that measures primary care spending as the proportion of total health care expenditures going to primary care. The proportion of total health care expenditures spent by insurance category were calculated with narrow and broad definitions of primary care providers. Parameters for these two definitions of primary care providers are listed below:
 - a. **Narrow (Milbank Memorial Fund):** Restricted to outpatient and office-based expenditures to primary care physicians only.
 - b. **Broad (Milbank Memorial Fund):** Spending for office-based care from NPs, PAs, behavioral health clinicians, and obstetricians/gynecologists. Includes the narrow definition of primary care spend.

Results of 2021 data from the Milbank Memorial Fund Primary Care Scorecard are listed below by insurance category of the Primary Care spending as a share of total health care spending in the narrow and broad definitions of Primary Care:

- Narrow: Commercial (7.1%); Medicaid (3.8%);
- Broad: Commercial (17.3%); Medicaid (12.4%)

¹Data for original Medicare was not available for this analysis. Analysis represents data from commercial payers that submitted CY2022 data: Aetna, BCBSMA, CCA, Cigna, Fallon, HPHC, HPI, MGBHP, THP, THPP, United, and United Medicare Advantage representing approximately 92% of the commercial market, 60% of the MassHealth MCO/ACO-A market, and 64% of the Medicare Advantage market in 2022. Totals may not sum due to rounding. Previously published data points are not comparable, differences are due to payer exclusions.

Managed Member Months Under an Alternative Payment Method (APM)

% of Managed Member Months Under an APM by Insurance Category			
Insurance Category	2020	2021	2022
Commercial	41.5%	42.2%	41.5%
MassHealth MCO/ACO-A	86.9%	87.4%	87.4%
Medicare Advantage	51.2%	47.5%	47.4%

1. **Date:** 2/28/2024
2. **Data/Measurement and submission years:** Data for each calendar year is collected 9 months after the end of the year, all data was published in March 2024.
3. **Description of metric:** The share of Massachusetts resident member months associated with a primary care provider whose care is paid for under an Alternative Payment Method (APM), including global contracts, limited budgets, bundled payments, or other non-fee for service-based payment arrangements. This measure captures the payment arrangement method for all care for members, not just primary care services. Additionally, this measure reflects the transaction of payments from a payer to a provider group.
 - a. **Numerator & exclusions:** Sum of member months under an APM arrangement.
 - b. **Denominator & exclusions:** Sum of all member months in the stratified population.
 - c. **Stratifier:** Data can be stratified by insurance category (e.g., Commercial, Medicaid MCO/ACO-A, Medicare Advantage) and product type (e.g., Health Maintenance Organization (HMO), Preferred Provider Organization (PPO)). Data can be stratified by payer and physician group in interactive Tableau.
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The Center for Health Information and Analysis' (CHIA) [Annual Report on the Performance of the Massachusetts Health Care System](#)
5. **Data cost:** Publicly available.
6. **Data release:** Data is reported to CHIA annually in September for the most recent calendar year. Data is published as part of CHIA's Annual Report each spring.
7. **Validator & source:** N/A

Capacity Measures

Percentage of Primary Care Physicians

Specialty	2018	2019-2020
Massachusetts state-wide total	30.4%	29.8%
Family Medicine/General Practice	5.6%	5.6%
Internal Medicine	16.1%	15.7%
Internal Medicine/Pediatrics	0.7%	0.7%
Preventative Medicine	0.7%	0.6%
Pediatrics	6.6%	6.4%
Geriatric Medicine	0.8%	0.8%

1. **Date:** 7/13/2023
2. **Data/Masurement and submission years:** 2019-2020. Data is updated every two years. Data accessed 7/13/2023.
3. **Description of metric:** Percentage of Massachusetts-based physicians who practice in primary care.
 - a. **Numerator & exclusions:** Total active primary care physicians. Physicians are counted as primary care physicians if their self-designated primary specialty is one of the following: family medicine/general practice, internal medicine, preventive medicine, internal medicine/pediatrics, pediatrics, or geriatric medicine. Physicians who are licensed by a state are considered active, provided they are working at least 20 hours per week.
 - b. **Denominator & exclusions:** Total active physicians
 - c. **Stratifier:** Massachusetts, primary care specialty
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [Massachusetts Physician Workforce Profile](#).
5. **Data release:** Data is updated every two years.
6. **Data cost:** Publicly available.
7. **Validator & source:** N/A

Percentage of Primary Care Physicians Aged 60 or Older

Specialty	2018	2019-2020
Massachusetts state-wide total	31.8%	33.7%
Family Medicine/General Practice	28.5%	30.1%
Internal Medicine	33.8%	35.6%
Internal Medicine/Pediatrics	4.8%	5.4%
Preventative Medicine	52.5%	52.2%
Pediatrics	32.1%	35.3%
Geriatric Medicine	17.9%	20.2%

1. **Date:** 7/13/2023
2. **Data/Masurement and submission years:** 2019-2020. Data is updated every two years. Data accessed 7/13/2023.
3. **Description of metric:** Percentage of Massachusetts-based physicians who practice in primary care aged 60 or older.
 - a. **Numerator & exclusions:** Total active primary care physicians aged 60 or older. Physicians are counted as primary care physicians if their self-designated primary specialty is one of the following: family medicine/general practice, internal medicine, preventive medicine, internal medicine/pediatrics, pediatrics, or geriatric medicine. Physicians who are licensed by a state are considered active, provided they are working at least 20 hours per week.
 - b. **Denominator & exclusions:** Total active primary care physicians.
 - c. **Stratifier:** Massachusetts, primary care specialty
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [Massachusetts Physician Workforce Profile](#).
5. **Data release:** Data is updated every two years.
6. **Data cost:** Publicly available.
7. **Validator & source:** N/A

Percentage of Primary Care Physicians Leaving Primary Care

Location	2019	2021
Massachusetts	3.1%	5.6%
U.S. & Territories	3.8%	5.2%

1. **Date:** 2/22/2024
2. **Data/Measurement and submission years:** 2019 and 2021. Data is updated every year. Data accessed 2/21/2024.
3. **Description of metric:** Percentage of primary care physicians leaving primary care in Massachusetts, displayed compared with the national rates.
 - a. **Numerator & exclusions:** Total count of primary care physicians (PCPs) who have exited primary care. Primary care is defined as physicians with a specialty in general family medicine, general practice, general internal medicine, internal medicine-pediatrics, geriatricians, and general pediatrics. For each year, the AMA Masterfile was merged with the CMS Public Use file. Medicare Physician and Other Practitioners data was used to identify physicians with a primary care specialty who billed more than 90% of their evaluation and management services from a hospital. Physicians with a primary care specialty who were hospitalists were reclassified as non-primary care. PCP includes those who in the previous year were a) in direct patient care and b) 75 years old or younger. An "Exit" from primary care is possible in three different ways: a) a transition from direct patient care to retired in the subsequent year, b) dropped from the AMA Masterfile in the subsequent year, or c) a transition from PCP to non-PCP in subsequent year (this mainly consists of hospitalists as well as PCPs who further specialize).
 - b. **Denominator & exclusions:** Total count of PCPs.
 - c. **Stratifier:** Massachusetts
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The Robert Graham Center derived this data from the AMA Masterfile 2012-2021; CMS Public Use file, Physicians and Other Suppliers, 2012-2021, to identify hospitalists.
5. **Data release:** Data is updated every year.
6. **Data cost:** N/A
7. **Validator & source:** N/A

Primary Care Physicians per Population

Specialty	2018	2019-2020
Massachusetts state-wide total	114.6	115.3
Family Medicine/General Practice	25.1	26.0
Internal Medicine	72.4	73.2
Internal Medicine/ Pediatrics	3.1	3.2
Preventative Medicine	3.0	3.0
Pediatrics	29.6	29.6
Geriatrics	3.4	3.6

1. **Date:** 7/13/2023
2. **Data/Measurement and submission years:** 2019-2020. Data is updated every two years. Data accessed 7/13/2023.
3. **Description of metric:** Active Massachusetts-based primary care physicians per 100,000 Massachusetts residents.
 - a. **Numerator & exclusions:** Active primary care physicians in Massachusetts or active primary care physicians in Massachusetts by the following specialties: family medicine/general practice, internal medicine, preventive medicine, internal medicine/pediatrics, pediatrics, or geriatric medicine. Physicians who are licensed by a state are considered active, provided they are working at least 20 hours per week.
 - b. **Denominator & exclusions:** State population of Massachusetts (per 100,000). 2018 population = 6,902,149. 2020 population = 6,892,503.
 - c. **Stratifier:** Massachusetts; primary care specialty
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [Massachusetts Physician Workforce Profile](#).
5. **Data release:** Data is updated every two years.
6. **Data cost:** Publicly available.
7. **Validator & source:**
 - a. [Area Health Resources Files](#). 2018-2019: 133 (numerator = primary care MDs in all counties; denominator = sum of population per county) = $9,143/6,902,149 = 133/100,000$
 - b. Massachusetts Health Quality Partners' (MHQP) [Massachusetts Provider Database \(MPD\)](#) 2020 primary care provider providers = $6,396/6,892,503 = 93/100,000$
 - c. [Robert Graham Center](#) (2018): National average of 76 primary care providers per 100,000.

Primary Care Physician Assistants per Population

State	2021	2022
Massachusetts	6.8	7.2

1. **Date:** 7/27/2023
2. **Data/Measurement and submission years:** 2022, published 2023. Data is updated annually. Data accessed 7/27/2023.
3. **Description of metric:** Physician Assistants who reside in Massachusetts and work in primary care per 100,000 Massachusetts residents.
 - a. **Numerator & exclusions:** Certified physician assistants who reside in Massachusetts and work in primary care. Primary care includes Family Medicine/General Practice, Internal Medicine-General and Pediatrics-General.
 - 2019: Number of certified PAs = 3,738. Percentage practicing in primary care = 17.0%.
 - 2020: Number of certified PAs = 4,007. Percentage practicing in primary care = 16.7%.
 - 2021: Number of certified PAs practicing in primary care = 473 (15.8%)
 - 2022: Number of certified PAs practicing in primary care = 503 (16.0%).
 - b. **Denominator & exclusions:** State population of Massachusetts (per 100,000).
 - 2019 state population = 6,894,883
 - 2020 state population = 6,995,729
 - 2021 state population = 6,989,690
 - 2022 state population = 6,981,974
 - c. **Stratifier:** Massachusetts
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [National Commission on Certification of Physician Assistants – Statistical Profile of Certified PAs by State 2019, 2020, 2021, 2022; MacroTrends](#) for population data
5. **Data release:** Data is updated annually.
6. **Data cost:** Publicly available.
7. **Validator & source:** N/A

Primary Care Nurse Practitioners

State	2021	2022
Massachusetts	3,753	4,029

1. **Date:** 4/22/2024
2. **Data/Measurement and submission years:** American Community Survey (ACS), 5-year sample 2018-2022.
3. **Description of metric:** Total number of Nurse Practitioners (NPs) in Massachusetts who practice in primary care.
 - a. **Numerator & exclusions:** Number of Nurse Practitioners in Massachusetts according to the ACS (6,200), divided in half ([approximately half of NPs practice as PCPs](#)) = 3,100.
 - b. **Denominator & exclusions:** Total count of all practicing Nurse Practitioners in Massachusetts according to the ACS.
 - c. **Stratifier:** Massachusetts
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [Health Policy Commission \(HPC\) Policy Brief: Nurse Practitioner Workforce and Its Role in the Massachusetts Health Care Delivery System](#)
5. **Data release:** 2024
6. **Data cost:** Publicly available.
7. **Validator & source:** The Kaiser Family Foundation reported that the [total number of Nurse Practitioners](#) in Massachusetts and in any specialty as of January 2024 was 10,289. According to AHRQ's report, [The Number of Nurse Practitioners and Physician Assistants Practicing Primary Care in the United States](#) stated that approximately half of NPs practiced as PCPs in 2010. The total number of NPs estimated to be in primary care in January 2024 is over 5,000.

Percentage of Massachusetts Medical School Graduates Entering Primary Care

Year	Selected Massachusetts Medical School	Percentage in Primary Care
2023	Massachusetts Total	22.0%
	School A	29.3%
	School B	25.5%
	School C	20.0%
	School D	13.7%

1. **Date:** 3/18/2024
2. **Data/Measurement and submission years:** 2023. Data is updated every year. Data accessed 3/13/2024.
3. **Description of metric:** Percentage of Massachusetts medical and osteopathic graduates practicing in primary care six to eight years after graduation.
 - a. **Numerator & exclusions:** Total count of students who graduated between 2015 and 2017, inclusive, from Massachusetts medical schools (students from Harvard Medical School, Boston University Chobanian & Avedisian School of Medicine, Tufts University School of Medicine, and UMass Chan Medical School) entering Primary Care. The numerators represent the number of graduates with a Primary Care specialty listed in AMA data. Primary Care includes Family Medicine, Internal Medicine, General Practice, Pediatrics, and Geriatrics. Note that not all students will be practicing in Massachusetts after graduation.
 - b. **Denominator & exclusions:** The denominators are all graduates with a valid specialty listed (primary care and otherwise) between 2015 and 2017, inclusive. This allows physicians to finish residency and be in practice by the 2022-2023 academic year.
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** Anonymized data was provided by the Robert Graham Center. Full Massachusetts information for 2013-2015 graduates is published on the [U.S. News & World Report website](#).
5. **Data release:** Data is updated every year.
6. **Data cost:** Publicly available.
7. **Validator & source:** [Contributions of US Medical Schools to Primary Care \(2003-2014\): Determining and Predicting Who Really Goes Into Primary Care](#): national primary care output rate = 22.3%

Primary Care Physician Salary

PC Physician & Pediatrician Average Salary		
Physician Type	2021 Average Salary	2022 Average Salary
Pediatrician	\$197,800	\$166,270
Family Medicine Physician	\$259,460	\$247,560
Range of average salaries: low*	\$183,500	\$166,270
Range of average salaries: high*	\$351,310	\$414,270

1. **Date:** 7/27/2023
2. **Data/Measurement and submission years:** May 2022 data released April 2023. Data accessed 7/27/2023.
3. **Description of metric:** Estimated average annual salary for a family medicine physician and a pediatrician in Massachusetts, compared to the range of average salaries for all Massachusetts physicians (2021 lowest average ([General Internal Medicine](#): \$183,500) and highest average ([Radiologist](#): \$351,310); 2022 lowest average ([Pediatrician](#): \$166,270) and highest average ([Dermatologist](#): \$414,270)).
 - a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** Massachusetts
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [U.S. Bureau of Labor Statistics](#). May 2021 and May 2022 State Occupational Employment and Wage Estimates (OEWS), MA, Healthcare practitioners. These occupational employment and wage estimates are calculated with data collected from employers in all industry sectors in metropolitan and nonmetropolitan areas in Massachusetts. [Technical Notes for May 2022 OEWS Estimates](#).
5. **Data release:** Data is updated annually.
6. **Data cost:** Publicly available.
7. **Validator & source:** Glassdoor is an American website where current and former employees anonymously review companies, and users submit salary information. Salary.com
 - a. [Glassdoor: How much does an Internal Medicine make in Massachusetts?](#) – \$216,630
 - b. [U.S. Bureau of Labor Statistics](#): General Internal Medicine salary: \$182,860
 - c. [Glassdoor.com: How much does a Primary Care Provider make in Massachusetts?](#) \$270,274
 - d. [Glassdoor.com: How much does a Pediatrician make in Massachusetts?](#) – \$252,636
 - e. [U.S. Bureau of Labor Statistics](#): Dermatologist salary: \$414,270
 - f. [Salary.com: Dermatologist Salary in the United States](#) – \$375,300
 - g. [Dermatologist Salary in Boston, Massachusetts | Salary.com](#) - \$422,900

Performance - Access Measures

Difficulty Obtaining Necessary Healthcare

Percent of MA Residents Reporting Difficulties Accessing Care in the Past 12 Months		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	32.0%
	Black, non-Hispanic	33.1%
	Asian, non-Hispanic	35.7%
	Other/multiple races, non-Hispanic	36.3%
	Hispanic	36.6%
	Total Population	33.0%
2023	White, non-Hispanic	40.4%
	Black, non-Hispanic	36.0%
	Asian, non-Hispanic	36.8%
	Other/multiple races, non-Hispanic	48.3%
	Hispanic	46.9%
	Total Population	41.2%

1. **Date:** 3/28/2024
2. **Data/Masurement and submission years:** 2021 and 2023.
3. **Description of metric:** Percent of Massachusetts residents who reported that they had difficulties accessing care in the past 12 months, defined in 2023 as the resident reporting any of the following difficulties: unable to get an appointment with doctor's office or clinic as soon as needed; unable to get an appointment with a specialist as soon as needed; doctor's office or clinic not accepting new patients; doctor's office or clinic not accepting insurance type; unable to get an appointment due to transportation issues. For more information, please see [2023 Massachusetts Health Insurance Survey \(MHIS\) Methodology Report](#).
 - a. **Numerator & exclusions:** Non-Institutionalized Massachusetts residents responding that they had any difficulties accessing care in the past 12 months.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents.
 - c. **Imputation Method:** Missing values for key demographic variables for the target and target's household members replaced through hot-deck imputation procedures.
 - d. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.

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- e. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
 5. **Data release:** Data is updated every two years.
 6. **Data cost:** Publicly available.
 7. **Validator & Source:** N/A

Primary Care Access (Adult, Commercial)

Year	Score	CI_Low	CI_High
2021	82.8	82.4	83.3
2022	82.3	81.9	82.8

1. **Date:** 2/28/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Primary Care Access Composite score (also known as the Organizational Access composite score) is a validated composite score on a 0-100 scale. It captures patient experiences of access to primary care services. Higher scores denote better access.

The 2022 and 2023 MHQP Patient Experience Surveys were based on the Clinician & Group Visit Survey 4.0 (beta) (CG-CAHPS Visit Survey) for adults and addressed multiple visit modes, including telehealth. The CG-CAHPS Visit Survey asked patients about their experiences with care at their most recent visit with an ambulatory care provider. It was used for synchronous visits – i.e., care that was delivered and received at the same time, in person, by phone, or by video. It was not used for care delivered through asynchronous methods, such as email or portal messages. The "beta" designation means that the instrument had not yet been field tested by the CAHPS Consortium or approved as a CAHPS survey. MHQP maintained survey composites and items that were not included in the CG-CAHPS Visit Survey to maintain consistency across survey years. The 2022 adult and child PES instruments had 59 items and 73 items, respectively. The 2023 adult and child PES instruments had 50 items and 66 items, respectively.

In previous years, MHQP used a sample frame of patients who had a primary care visit that occurred within a 12-month period. In 2021, the criteria changed to a 6-month lookback period. The sample frame includes patients who had at least one primary care visit that occurred during the previous calendar year, typically between July and December. The survey is fielded from April through July. In 2022, the survey sampled 162,121 adult patients from 632 adult primary care practices statewide. In 2023, the survey sampled 159,047 adult patients from 645 adult primary care practices statewide. Physicians with a primary specialty designation of Internal Medicine, Pediatrics, Family Medicine or General Medicine and practicing as primary care providers, and nurse practitioners and physician assistants practicing as primary care providers, were eligible for the survey. Providers must also have had a panel size of at least 20 eligible patients across the participating health plans. Practices having at least three providers meeting these criteria were included. Using health plan claims visit data, each provider was classified as either "adult" or "child," based on the age of the majority of his or her patients in the sample pool (child=ages 0-17; adult=ages 18 and older). To ensure that only active patients of a provider were included, the survey instrument included initial questions that served to confirm that the patient considered the provider named on the survey to be their primary care provider; and the patient had at least one visit with that provider in the previous 6 months. Sample sizes were designed to provide information at the practice-site level. The survey pull was a standard random sampling of all eligible patients.

To be eligible for the survey, patients met the following criteria: were currently enrolled in one of the participating commercial health plans; was a commercial member in an HMO, POS, or PPO health plan product; was age 18 and older to receive an adult survey; and was a patient of a Massachusetts primary care providers.

Survey invitations were sent to patients by email, if a patient had a valid email, that had links to online surveys in English, Chinese, Portuguese, Russian and Spanish. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. The response rate to the 2022 adult survey was 14.7% and for the 2022 child survey 9.7%. The response rate to the 2023 adult survey was 15.2% and for the 2023 child survey was 9.4%.

Survey item responses were coded to a 0 to 100 scale (Never=0; Sometimes=33.33; Usually=66.67; Always= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. If fewer than half of the questions had valid responses for a given respondent, then the composite was considered missing. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

<i>Organizational Access composite items</i>	When you called this provider’s office to get an appointment for care you needed right away , how often did you get an appointment as soon as you needed?
	When you made an appointment for a check-up or routine care with this provider, how often did you get an appointment as soon as you needed?
	When you called this provider’s office during regular office hours, how often did you get an answer to your medical question that same day?

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Primary Care Access composite (also known as the Organizational Access composite) are the 2022 and 2023 MHQP Massachusetts Patient Experience Surveys of commercially insured patients.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Primary Care Access (Child, Commercial)

Year	Score	CI_Low	CI_High
2021	89.7	89.2	90.2
2022	89.7	89.2	90.2

1. **Date:** 3/4/2024
2. **Data/Masurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Primary Care Access Composite score (also known as the Organizational Access composite score) is a validated composite score on a 0-100 scale. It captures patient experiences of access to primary care services. Higher scores denote better access.

The 2022 and 2023 MHQP Patient Experience Surveys were based on the Clinician & Group Visit Survey 4.0 (beta) (CG-CAHPS Visit Survey) for adults and addressed multiple visit modes, including telehealth. The CG-CAHPS Visit Survey asked patients about their experiences with care at their most recent visit with an ambulatory care provider. It was used for synchronous visits – i.e., care that was delivered and received at the same time, in person, by phone, or by video. It was not used for care delivered through asynchronous methods, such as email or portal messages. The "beta" designation means that the instrument had not yet been field tested by the CAHPS Consortium or approved as a CAHPS survey. For the child PES instrument, MHQP adapted the adult PES instrument to a child version. MHQP maintained survey composites and items that were not included in the CG-CAHPS Visit Survey to maintain consistency across survey years. The 2022 adult and child PES instruments had 59 items and 73 items, respectively. The 2023 adult and child PES instruments had 50 items and 66 items, respectively.

In previous years, MHQP used a sample frame of patients who had a primary care visit that occurred within a 12-month period. In 2021, the criteria changed to a 6-month lookback period. The sample frame includes patients who had at least one primary care visit that occurred during the previous calendar year, typically between July and December. The survey is fielded from April through July. In 2022, the survey sampled 81,561 pediatric patients from 191 pediatric primary care practices statewide. In 2023, the survey sampled 72,601 pediatric patients from 191 pediatric primary care practices statewide. Physicians with a primary specialty designation of Internal Medicine, Pediatrics, Family Medicine or General Medicine and practicing as primary care providers, and nurse practitioners and physician assistants practicing as primary care providers, were eligible for the survey. Providers must also have had a panel size of at least 20 eligible patients across the participating health plans. Practices having at least three providers meeting these criteria were included. Using health plan claims visit data, each provider was classified as either "adult" or "child," based on the age of the majority of his or her patients in the sample pool (child=ages 0-17; adult=ages 18 and older). To ensure that only active patients of a provider were included, the survey instrument included initial questions that served to confirm that the patient considered the provider named on the survey to be their child's primary provider (pediatric survey); and the patient had at least one visit with that provider in the previous 6 months. Sample sizes were designed to provide information at the practice-site level. The survey pull was a standard random sampling of all eligible patients.

To be eligible for the survey, patients met the following criteria: were currently enrolled in one of the participating commercial health plans; was a commercial member in an HMO, POS, or PPO health plan product; was age 17 or younger to receive a pediatric survey; and was a patient of a Massachusetts primary care providers.

Survey invitations were sent to patients by email, if a patient had a valid email, that had links to online surveys in English, Chinese, Portuguese, Russian and Spanish. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. The response rate to the 2022 adult survey was 14.7% and for the 2022 child survey was 9.7%. The response rate to the 2023 adult survey was 15.2% and for the 2023 child survey was 9.4%.

Survey item responses were coded to a 0 to 100 scale (Never=0; Sometimes=33.33; Usually=66.67; Always= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. If fewer than half of the questions had valid responses for a given respondent, then the composite was considered missing. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

<i>Organizational Access composite items</i>	When you contacted this provider's office to get an appointment for care your child needed right away , how often did you get an appointment as soon as your child needed?
	When you made an appointment for a check-up or routine care for your child with this provider, how often did you get an appointment as soon as your child needed?
	When you called this provider's office during regular office hours, how often did you get an answer to your medical question that same day?

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Primary Care Access composite (also known as the Organizational Access composite) are the 2022 and 2023 MHQP Massachusetts Patient Experience Surveys of commercially insured patients.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Residents Who Have a Primary Care Provider

Percentage of Massachusetts Residents Who Have a Primary Care Provider		
Year	Race/Ethnicity	Percent (%)
2023	White, non-Hispanic	93.3%
	Black, non-Hispanic	86.5%
	Asian, non-Hispanic	89.3%
	Other/multiple races, non-Hispanic	89.5%
	Hispanic	81.3%
	Total Population	90.9%

1. **Date:** 3/28/2024
2. **Data/Measurement and submission years:** 2023.
3. **Description of metric: Numerator & exclusions:** Percentage of non-Institutionalized Massachusetts residents responding that they had a primary care provider at the time of the survey.
 - a. **Denominator & exclusions:** Non-institutionalized Massachusetts residents.
 - b. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - c. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - d. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
5. **Data release:** Data is updated every two years.
6. **Data cost:** Publicly available.
7. **Validator & Source:** N/A

Primary Care Access (Adult, MassHealth)

Year	Score	CI_Low	CI_High
2021	77.5	77.0	78.0
2022	75.6	75.1	76.1

1. **Date:** 2/22/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Primary Care Access Composite score (also known as the Organizational Access composite score) is a validated composite score on a 0-100 scale. It captures patient experiences of access to primary care services. Higher scores denote better access.
The 2022 and 2023 MassHealth Primary Care Member Experience Surveys for adult members (PC Adult MES) were based on the CG-CAHPS 3.0 survey developed by the National Committee for Quality Assurance (NCQA) and the Agency for Healthcare Research and Quality (AHRQ).
 - The 2022 PC Adult MES had 57 items. The survey was fielded in February 2022 and sampled 117,455 adult members.
 - The 2023 PC Adult MES had 57 items. The survey was fielded in May 2023 and sampled 121,352 adult members.

The survey sample was randomly selected from a MassHealth sample frame that contained MassHealth adult members (≥ 18 years old) who were eligible to complete the survey. Eligibility requirements were that the member be actively enrolled in MassHealth, be attributed to an ACO that participated in the MassHealth program and have at least one primary care visit in the last year. Sample sizes were designed to yield a minimum of 400 completed surveys at the ACO level. Survey invitations were sent to members by email, if a member had a valid email address on file with MassHealth. Email invitations had links to online surveys in English, Spanish, Portuguese, Chinese, Haitian Creole, Vietnamese, Russian, Khmer, and Arabic for the 2022 and 2023 surveys. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. For members who were on file as being Spanish speakers, mailings also contained a Spanish survey. The response rate for the 2022 adult survey was 10.0%. The response rate for the 2023 adult survey was 8.5%.

Survey item responses were coded to a 0 to 100 scale (Never=0; Sometimes=33.33; Usually=66.67; Always= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

	Question	Response options
<i>Organizational Access composite items</i>	In the last 12 months, when you called this provider's office to get an appointment for care you needed right away, how often did you get an appointment as soon as you needed?	Never Sometimes Usually Always
	In the last 12 months, when you made an appointment for a check-up or routine care with this provider, how often did you get an appointment as soon as you needed?	
	In the last 12 months, when you called this provider's office during regular office hours, how often did you get an answer to your medical question that same day?	

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Primary Care Access composite score were the 2022 and 2023 MassHealth Adult Primary Care Member Experience Surveys.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Primary Care Access (Child, MassHealth)

Year	Score	CI_Low	CI_High
2021	82.2	81.7	82.7
2022	80.9	80.3	81.5

1. **Date:** 2/22/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Primary Care Access composite Score (also known as the Organizational Access composite score) is a validated composite score on a 0-100 scale. It captures patient experiences of access to primary care services. Higher scores denote better access.

The 2022 and 2023 MassHealth Primary Care Member Experience Surveys for child members (PC Child MES) were based on the CG-CAHPS 3.0 survey developed by the National Committee for Quality Assurance (NCQA) and the Agency for Healthcare Research and Quality (AHRQ).

- The 2022 PC Child MES had 63 items in the paper survey and 74 items in the web survey. The survey was fielded in February 2022 and sampled 154,822 child members.
- The 2023 PC Child MES had 63 items in the paper survey and 74 items in the web survey. The survey was fielded in May 2023 and sampled 165,760 child members.

The survey sample was randomly selected from a MassHealth sample frame that contained MassHealth child members (<18 years old) who were eligible to complete the survey. Eligibility requirements were that the member be actively enrolled in MassHealth, be attributed to an ACO that participated in the MassHealth program and have at least one primary care (pediatric) visit in the last year. Sample sizes were designed to yield a minimum of 400 completed surveys at the ACO level. Survey invitations were sent to the parents or guardians of child members by mail. Mailings contained a survey invitation with an English survey and an URL to access online surveys. In 2022 and 2023, online surveys were available in English, Spanish, Portuguese, Chinese, Haitian Creole, Vietnamese, Russian, Khmer, and Arabic. For child members who were on file as being Spanish speakers, mailings also contained a Spanish survey. The response rate for the 2022 child survey was 5.0%. The response rate for the 2023 child survey was 4.2%.

Survey item responses were coded to a 0 to 100 scale (Never=0; Sometimes=33.33; Usually=66.67; Always= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

	Question	
<i>Organizational Access composite items</i>	In the last 12 months, when you called this provider's office for an appointment for care your child needed right away, how often did you get an appointment as soon as your child needed?	Never Sometimes Usually
	In the last 12 months, when you made an appointment for a check-up or routine care for your child with this provider, how often did you get an appointment as soon as your child needed?	Always
	In the last 12 months, when you called this provider's office during regular office hours, how often did you get an answer to your medical question that same day?	

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Primary Care Access composite score were the 2022 and 2023 MassHealth Child Primary Care Member Experience Surveys.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Usual Source of Care

Percent of MA Residents Who Reported Having a Usual Source of Healthcare (Excluding the Emergency Room)		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	90.8%
	Black, non-Hispanic	81.2%
	Asian, non-Hispanic	82.1%
	Other/multiple races, non-Hispanic	83.1%
	Hispanic	81.3%
	Total Population	88.1%
2023	White, non-Hispanic	90.6%
	Black, non-Hispanic	87.1%
	Asian, non-Hispanic	86.1%
	Other/multiple races, non-Hispanic	84.3%
	Hispanic	84.6%
	Total Population	88.9%

1. **Date:** 3/26/2024
2. **Data/Masurement and submission years:** 2021 and 2023.
3. **Description of metric:** Percent of Massachusetts residents who reported that they had a place to which they usually go when they are sick or need advice about their health other than the emergency department. For more information, please see 2023 [Massachusetts Health Insurance Survey \(MHIS\) Methodology Report](#).
 - a. **Numerator & exclusions:** Non-institutionalized Massachusetts residents responding that they had a usual source of care, excluding the emergency department.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents.
 - c. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a twostep procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - d. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - e. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
5. **Data release:** Data is updated every two years.

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6. **Data cost:** Publicly available.
 7. **Validator & Source:** N/A

Usual Source of Care by Setting Type

Percent of MA Residents Who Reported a Usual Source of Care Type of Clinic		
Year	Type of Clinic	Percent (%)
2023	A Doctor's Office or Private Clinic	78.8%
	A Community Health Center or other Public Clinic	9.4%
	A Hospital Outpatient Department	3.9%
	An Urgent Care Center that is not Part of a Community Health Center	3.0%

1. **Date:** 3/1/2024
2. **Data/Masurement and submission year:** 2023.
3. **Description of metric:** Percentage of Massachusetts residents with a usual source of care who indicated the type of care they received, excluding the emergency department, for when they are sick or need advice about their health. For more information, please see 2023 [Massachusetts Health Insurance Survey \(MHIS\)](#) Methodology Report
 - a. **Numerator & exclusions:** Non-institutionalized Massachusetts residents responding that they had a usual source of care, excluding the emergency department.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents.
 - c. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and non-respondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - d. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - e. **Risk Adjusted:** N/A
4. **Data source & status:** MHIS
5. **Data release:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
6. **Data cost:** Publicly available.
7. **Validator & Source:** N/A

Performance - Care Measures

Colorectal Cancer Screening

Members Between 50-75 Year Old Who Had Appropriate Screening for Colorectal Cancer	
Year	Percent (%)
2020	74.6%
2022	72.1%

1. **Date:** 01/31/2024
2. **Data/Masurement and submission years:** Healthcare Effectiveness Data and Information Set (HEDIS®) measurement years 2020 and 2022.
3. **Description of metric:** This measure assesses the percentage of members 50–75 years of age who had an appropriate screening for colorectal cancer. Data reflects HEDIS® specifications for colorectal cancer screening in measurement years 2020 and 2021.
 - a. **Numerator & exclusions:** Commercially insured members, 51-75 years of age as of December 31 of the measurement year, enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England) who received one or more screenings for colorectal cancer during the measurement year. Members receiving palliative care and members 66 years of age with frailty and advanced illness were excluded from both the numerator and denominator of the measure.
 - b. **Denominator & exclusions:** Commercially insured members, 51-75 years of age as of December 31 of the measurement year, enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England).
 - c. **Stratifier:** N/A
 - d. **Weighting Scheme:** NCQA permits health plans to calculate this measure using either administrative data only, or administrative data combined with medical record review (Hybrid Method). If a health plan chose to report eligible measures to NCQA using the Hybrid Method, the health plan reported the rate for their sample population based on Administrative Data Method and the rate based on the Hybrid Method (combination of administrative data and medical record review data) to MHQP. This enabled MHQP to calculate a “chart adjustment factor,” which represents the increase in a plan’s measured rate after medical record review (i.e., the Hybrid Method rate minus the Administrative Data Method only rate). MHQP adjusted the rates that were obtained for the health plan’s entire HEDIS®-eligible population using the Administrative Data Method by applying the respective chart adjustment factors to each affected measure for the provider site, medical group, or physician network.
 - e. **Imputation method:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (July 2022). [A Focus on Provider Quality: Selected Clinical Measures, 2018 and 2020.](#)

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5. **Data cost:** Publicly available.
 6. **Data release:** Data released biennially.
 7. **Validator & source:** Centers for Diseases Control and Prevention, National Cancer Institute [State Cancer Profiles](#): An estimated 75.7% of Massachusetts' residents ages 45-75 had Colorectal Cancer Screenings in 2022 by either a home blood stool test in the past year or received at least one recommended CRC test. Statewide rate is based on Behavioral Risk Factor Surveillance System (BRFSS) data.

Breast Cancer Screening

Percentage of Women 50-74 Year of Age Who Had a Mammogram to Screen for Breast Cancer	
Year	Percent (%)
2020	81.7%
2022	84.8%

1. **Date:** 01/31/2024
2. **Data/Masurement and submission years:** Healthcare Effectiveness Data and Information Set (HEDIS®) measurement years 2020 and 2022
3. **Description of metric:** This measure assesses the percentage of women 50–74 years of age who had a mammogram to screen for breast cancer. Data reflects HEDIS® specifications for breast cancer screening in measurement years 2020 and 2021.
 - a. **Numerator & exclusions:** Commercially insured women, 52–74 years as of December 31 of the measurement year, enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England) that received one or more mammograms to screen for breast cancer any time on or between October 1 two years prior to the measurement year and December 31 of the measurement year. Exclusions include individuals receiving palliative care.
 - b. **Denominator & exclusions:** Commercially insured women, 52–74 years as of December 31 of the measurement year, enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England). Exclusions include individuals receiving palliative care.
 - c. **Stratifier:** N/A
 - d. **Weighting Scheme:** N/A
 - e. **Imputation method:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (July 2022). [A Focus on Provider Quality: Selected Clinical Measures, 2018 and 2020](#).
5. **Data cost:** Publicly available.
6. **Data release:** Data released biennially.
7. **Validator & source:** Centers for Disease Control and Prevention, National Cancer Institute, [Screening and Risk Factors Table](#): In 2022, 84.9% of women ages 50-74 received a mammogram over the last two years. Statewide rate is based on Behavioral Risk Factor Surveillance System (BRFFS) data.

Cervical Cancer Screening

Percentage of Women 21-64 Years of Age Who Were Screened for Cervical Cancer	
Year	Percent (%)
2020	85.2%
2022	81.4%

1. **Date:** 01/31/2024
2. **Data/Measurement and submission years:** Healthcare Effectiveness Data and Information Set (HEDIS®) measurement years 2020 and 2022.
3. **Description of metric:** This measure assesses the percentage of women 21–64 years of age who were screened for cervical cancer. Data reflects HEDIS® specifications for cervical cancer screening in measurement years 2020 and 2021.
 - a. **Numerator & exclusions:** Commercially insured women enrollees, 24–64 years of age as of December 31 of the measurement year, in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England) who were screened for cervical cancer during the measurement year or two years prior to the measurement year.
 - b. **Denominator & exclusions:** Commercially insured women enrollees, 24–64 years of age as of December 31 of the measurement year, in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England). Exclusions include individuals receiving hospice care.
 - c. **Stratifier:** N/A
 - d. **Weighting Scheme:** N/A
 - e. **Imputation method:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (July 2022). [A Focus on Provider Quality: Selected Clinical Measures, 2018 and 2020.](#)
5. **Data cost:** Publicly available from CHIA
6. **Data release:** Data released biennially by CHIA
7. **Validator & source:** Centers for Disease Control and Prevention, Nation Cancer Institute, State Cancer Profiles [Screening and Risk Factors Table](#): In 2020, 77.8% of Women ages 21-65 had a pap smear test in the past three years. Statewide rate is based on Behavioral Risk Factor Surveillance System (BRFSS) data.

Well-Child Visits in the First 30 Months of Life: 0 – 15 Months

Percentage of Children Who Had Six or More Well-Child Visits On or Before Their 15-Month Birthday	
Year	Percent (%)
2020	93.6%
2022	94.6%

1. **Date:** 2/1/2024
2. **Data/Metric and submission years:** Healthcare Effectiveness Data and Information Set (HEDIS®) measurement years 2018, 2020, and 2022.
3. **Description of metric:** This measure assesses the percentage of children who had six or more well-child visits on or before their 15-month birthday. Data reflects HEDIS® specifications for well child visits in measurement years 2018, 2020, and 2022.
 - a. **Numerator & exclusions:** Commercially insured enrollees who turned 15 months old during the measurement year enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England), who had six or more well-child visits on or before their 15-month birthday. The visits must be with a primary care provider (PCP), but the PCP does not need to be the practitioner assigned to the child.
 - b. **Denominator & exclusions:** Commercially insured enrollees who turned 15 months old during the measurement year and were enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England). Exclusions include individuals receiving hospice care.
 - c. **Weighting Scheme:** N/A
 - d. **Imputation method:** N/A
 - e. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (July 2022). [A Focus on Provider Quality: Selected Clinical Measures, 2018, 2020 and 2022 \(2022 coming summer 2024\)](#).
5. **Data cost:** Publicly available.
6. **Data release:** Data released biennially.
7. **Validator & source:** 92.2% of children ages 0-2 years old in Massachusetts received a well-child visit in the past 12 months, 2022 ([Published by United Health Foundation](#))

Childhood Immunization Status (Combo 10)

Childhood Immunization Status (Combination 10)	
Year	Percent (%)
2022	74.0%

1. **Date:** 3/5/2024
2. **Data/Metric and submission years:** Healthcare Effectiveness Data and Information Set (HEDIS®) measurement year 2022.
3. **Description of metric:** This measure assesses the percentage of children who turned 2 years old during the measurement year and who had received: four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV); one measles, mumps and rubella (MMR); three haemophilus influenza type B (HiB); three hepatitis B (HepB), one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. Data reflects HEDIS® specifications for childhood immunization status (Combo 10) in measurement year 2022.
 - a. **Numerator & exclusions:** Commercially insured members, at least 2 years of age as of December 31 of the measurement year, enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/Tufts Health Plan), and Health New England) who received: four diphtheria, tetanus and acellular pertussis (DTaP); three polio (IPV); one measles, mumps and rubella (MMR); three haemophilus influenza type B (HiB); three hepatitis B (HepB), one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines on or before their second birthday. Since this is a metric for combination vaccinations that require more than one antigen (i.e., DTaP and MMR), evidence of all vaccinations must be found.
 - b. **Denominator & exclusions:** Commercially insured members, at least 2 years of age as of December 31 of the measurement year, enrolled in HMO and Point of Service (excluding Marketplace) products in participating health plans (Mass General Brigham Health Plan, Blue Cross Blue Shield of Massachusetts, Point32Health (Harvard Pilgrim Health Care/ Tufts Health Plan), and Health New England.
 - c. **Stratifier:** N/A
 - d. **Weighting Scheme:** NCQA permits health plans to calculate this measure using either administrative data only, or administrative data combined with medical record review (Hybrid Method). If a health plan chose to report eligible measures to NCQA using the Hybrid Method, the health plan reported the rate for their sample population based on Administrative Data Method and the rate based on the Hybrid Method (combination of administrative data and medical record review data) to MHQP. This enabled MHQP to calculate a “chart adjustment factor,” which represents the increase in a plan’s measured rate after medical record review (i.e., the Hybrid Method rate minus the Administrative Data Method only rate). MHQP adjusted the rates that were obtained for the health plan’s entire HEDIS®-eligible population using the Administrative Data Method by applying the respective chart adjustment factors to each affected measure for the provider site, medical group, or physician network.
 - e. **Imputation method:** N/A

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- f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (July 2022). [A Focus on Provider Quality: Selected Clinical Measures, 2018, 2020 and 2022 \(2022 coming summer 2024\)](#)
 5. **Data cost:** Publicly available.
 6. **Data release:** Data released biennially.
 7. **Validator & source:** 79.9% of children received the Combined 7 Vaccine Series by age 24 months (2022 data, [CDC ChildVaxView](#)). The combined 7 Vaccine Series includes ≥ 4 doses of DTaP, ≥ 3 doses of poliovirus vaccine, ≥ 1 dose of measles-containing vaccine, full series of Hib vaccine (≥ 3 or ≥ 4 doses, depending on product type), ≥ 3 doses of HepB, ≥ 1 dose of varicella vaccine, and ≥ 4 doses of PCV.

Adult Influenza Vaccinations

Season	Population	Percent (%)
2021-2022	All Residents \geq 18 Years	59.4%
2022-2023	All Residents \geq 18 Years	62.4%

1. **Date:** 2/2/2024
2. **Data/Measurement and submission years:** 2018-2019 influenza season (September 2018 – June 2019); 2020 – 2021 influenza season (September 2020 – June 2021); 2021 – 2022 influenza season (September 2021 – June 2022); 2022 – 2023 influenza season (September 2022 – June 2023)
3. **Description of metric:** Estimated proportion of Massachusetts adults (18+) that received the seasonal influenza vaccination.
 - a. **Numerator & exclusions:** Respondents who did not have either a yes or no response to the question on whether they received flu vaccination in the past 12 months were excluded from the analysis.
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** Massachusetts; adults \geq 18; race and ethnicity (based on self-report)
 - d. **Weighting Scheme:** Flu vaccination coverage estimates from the Behavioral Risk Factor Surveillance System (BRFSS) were calculated using Kaplan-Meier survival analysis using month of reported flu vaccination to determine cumulative flu vaccination coverage. The coverage estimate weighted percentages by the U.S. population.
 - e. **Imputation method:** Month and year of vaccination were imputed for respondents with missing month and year of vaccination date.
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** [Centers for Disease Control and Prevention. Flu Vaccination Coverage, Adults 18 years and older, United States Behavioral Risk Factor Surveillance System \(BRFSS\), 2022-23 Season](#)
5. **Data cost:** Publicly available.
6. **Data release:** Data updated annually.
7. **Validator & source:** America's Health Rankings (United Health Foundation), 57% of Massachusetts adults received a flu vaccine in the past 12 months, 2022.

Patient-Provider Communication (Adult, Commercial)

Commercial Population Patient Experience of Adult Patient Provider Communication in PC Visits		
Year	95% CI	Score
2021	96.0 to 96.4	96.2
2022	96.0 to 96.4	96.2

1. **Date:** 3/7/2024
2. **Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Communication Composite score is a validated composite score on a 0-100 scale that is derived from 4 survey items. It captures patient experiences of patient-provider communication in primary care visits. Higher scores denote better communication.

The 2022 and 2023 MHQP Patient Experience Surveys were based on the Clinician & Group Visit Survey 4.0 (beta) (CG-CAHPS Visit Survey) for adults and addressed multiple visit modes, including telehealth. The CG-CAHPS Visit Survey asked patients about their experiences with care at their most recent visit with an ambulatory care provider. It was used for synchronous visits – i.e., care that was delivered and received at the same time, in person, by phone, or by video. It was not used for care delivered through asynchronous methods, such as email or portal messages. The "beta" designation means that the instrument had not yet been field tested by the CAHPS Consortium or approved as a CAHPS survey. The 2022 adult and child PES instruments had 59 items and 73 items, respectively. The 2023 adult and child PES instruments had 50 items and 66 items, respectively.

In previous years, MHQP used a sample frame of patients who had a primary care visit that occurred within a 12-month period. In 2021, the criteria changed to a 6-month lookback period. The sample frame includes patients who had at least one primary care visit that occurred during the previous calendar year, typically between July and December. The survey is fielded from April through July. In 2022, the survey sampled 162,121 adult patients from 632 adult primary care practices statewide. In 2023, the survey sampled 159,047 adult patients from 645 adult primary care practices statewide. Physicians with a primary specialty designation of Internal Medicine, Pediatrics, Family Medicine or General Medicine and practicing as primary care providers, and nurse practitioners and physician assistants practicing as primary care providers, were eligible for the survey. Providers must also have had a panel size of at least 20 eligible patients across the participating health plans. Practices having at least three providers meeting these criteria were included. Using health plan claims visit data, each provider was classified as either "adult" or "child," based on the age of the majority of his or her patients in the sample pool (child=ages 0-17; adult=ages 18 and older). To ensure that only active patients of a provider were included, the survey instrument included initial questions that served to confirm that the patient considered the provider named on the survey to be their primary care provider; and the patient had at least one visit with that provider in the previous 6 months. Sample sizes were designed to provide information at the practice-site level. The survey pull was a standard random sampling of all eligible patients.

To be eligible for the survey, patients met the following criteria:

- Were currently enrolled in one of the participating commercial health plans;
- Was a commercial member in an HMO, POS, or PPO health plan product;
- Was age 18 and older to receive an adult survey; and
- Was a patient of a Massachusetts primary care providers.

Survey invitations were sent to patients by email, if a patient had a valid email, that had links to online surveys in English, Chinese, Portuguese, Russian and Spanish. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. The response rate to the 2022 adult survey was 14.7% and for the 2022 child survey 9.7%. The response rate to the 2023 adult survey was 15.2% and for the 2023 child survey was 9.4%.

Survey item responses were coded to a 0 to 100 scale (No=0; Yes, somewhat=50.0; Yes, definitely=100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. If fewer than half of the questions had valid responses for a given respondent, then the composite could not be calculated and was considered missing. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

Communication Composite items and response options

<i>Communication</i>	During your most recent visit, did this provider explain things in a way that was easy to understand?	Yes, definitely
	During your most recent visit, did this provider listen carefully to you?	Yes, somewhat
	During your most recent visit, did this provider show respect for what you had to say?	No
	During your most recent visit, did this provider spend enough time with you?	

- Numerator & exclusions:** N/A
 - Denominator & exclusions:** N/A
 - Stratifier:** N/A
 - Imputation method:** N/A
 - Weighting Scheme:** N/A
 - Risk Adjusted:** N/A
- Data source & status:** The data sources for the Communication Composite score are the 2022 and 2023 MHQP Massachusetts Patient Experience Surveys of commercially insured patients.
 - Data cost:** No cost.
 - Data release:** Data is collected annually and released annually, usually in the fall.
 - Validator & source:** N/A
 - Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Patient-Provider Communication (Child, Commercial)

Commercial Population Patient Experience of Child Patient Provider Communication in PC Visits		
Year	95% CI	Score
2021	98.2 to 98.5	98.4
2022	98.0 to 98.5	98.2

1. **Date:** 3/7/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:**

The Communication Composite score is a validated composite score on a 0-100 scale that is derived from 4 survey items. It captures patient experiences of patient-provider communication in primary care visits. Higher scores denote better communication.

The 2022 and 2023 MHQP Patient Experience Surveys were based on the Clinician & Group Visit Survey 4.0 (beta) (CG-CAHPS Visit Survey) for adults and addressed multiple visit modes, including telehealth. The CG-CAHPS Visit Survey asked patients about their experiences with care at their most recent visit with an ambulatory care provider. It was used for synchronous visits – i.e., care that was delivered and received at the same time, in person, by phone, or by video. It was not used for care delivered through asynchronous methods, such as email or portal messages. The "beta" designation means that the instrument had not yet been field tested by the CAHPS Consortium or approved as a CAHPS survey. For the child PES instrument, MHQP adapted the adult PES instrument to a child version. MHQP maintained survey composites and items that were not included in the CG-CAHPS Visit Survey to maintain consistency across survey years. The 2022 adult and child PES instruments had 59 items and 73 items, respectively. The 2023 adult and child PES instruments had 50 items and 66 items, respectively.

In previous years, MHQP used a sample frame of patients who had a primary care visit that occurred within a 12-month period. In 2021, the criteria changed to a 6-month lookback period. The sample frame includes patients who had at least one primary care visit that occurred during the previous calendar year, typically between July and December. The survey is fielded from April through July. In 2022, the survey sampled 81,561 pediatric patients from 191 pediatric primary care practices statewide. In 2023, the survey sampled 72,601 pediatric patients from 191 pediatric primary care practices statewide. Physicians with a primary specialty designation of Internal Medicine, Pediatrics, Family Medicine or General Medicine and practicing as primary care providers, and nurse practitioners and physician assistants practicing as primary care providers, were eligible for the survey. Providers must also have had a panel size of at least 20 eligible patients across the participating health plans. Practices having at least three providers meeting these criteria were included. Using health plan claims visit data, each provider was classified as either "adult" or "child," based on the age of the majority of his or her patients in the sample pool (child=ages 0-17; adult=ages 18 and older). To ensure that only active patients of a provider were included, the survey instrument included initial questions that served to confirm that the patient considered the provider named

on the survey to be their child's primary provider (pediatric survey); and the patient had at least one visit with that provider in the previous 6 months. Sample sizes were designed to provide information at the practice-site level. The survey pull was a standard random sampling of all eligible patients.

To be eligible for the survey, patients met the following criteria:

- Were currently enrolled in one of the participating commercial health plans;
- Was a commercial member in an HMO, POS, or PPO health plan product;
- Was age 17 or younger to receive a pediatric survey; and
- Was a patient of a Massachusetts primary care providers.

Survey invitations were sent to patients by email, if a patient had a valid email, that had links to online surveys in English, Chinese, Portuguese, Russian and Spanish. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. The response rate to the 2022 adult survey was 14.7% and for the 2022 child survey 9.7%. The response rate to the 2023 adult survey was 15.2% and for the 2023 child survey was 9.4%.

Survey item responses were coded to a 0 to 100 scale (No=0; Yes, somewhat=50.0; Yes, definitely=100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. If fewer than half of the questions had valid responses for a given respondent, then the composite could not be calculated and was considered missing. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

Communication Composite items and response options

<i>Communication composite</i>	During your child's most recent visit, did this provider explain things about your child's health in a way that was easy to understand?	Yes, definitely Yes, somewhat No
	During your child's most recent visit, did this provider listen carefully to you?	
	During your child's most recent visit, did this provider show respect for what you had to say?	
	During your child's most recent visit, did this provider spend enough time with your child?	

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Communication Composite score are the 2022 and 2023 MHQP Massachusetts Patient Experience Surveys of commercially insured patients.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A

8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Patient-Provider Communication (Adult, MassHealth)

Year	Score	CI_Low	CI_High
2021	87.6	87.2	88.0
2022	86.9	86.5	87.3

1. **Date:** 2/22/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Communication Composite score is a validated composite score on a 0-100 scale that is derived from 4 survey items. It captures patient experiences of patient-provider communication in primary care visits. Higher scores denote better communication.

The 2022 and 2023 MassHealth Primary Care Member Experience Surveys for adult members (PC Adult MES) were based on the CG-CAHPS 3.0 survey developed by the National Committee for Quality Assurance (NCQA) and the Agency for Healthcare Research and Quality (AHRQ).

- The 2022 PC Adult MES had 57 items. The survey was fielded in February 2022 and sampled 117,455 adult members.
- The 2023 PC Adult MES had 57 items. The survey was fielded in May 2023 and sampled 121,352 adult members.

The survey sample was randomly selected from a MassHealth sample frame that contained MassHealth adult members (≥ 18 years old) who were eligible to complete the survey. Eligibility requirements were that the member be actively enrolled in MassHealth, be attributed to an ACO that participated in the MassHealth program and have at least one primary care visit in the last year. Sample sizes were designed to yield a minimum of 400 completed surveys at the ACO level. Survey invitations were sent to members by email, if a member had a valid email address on file with MassHealth. Email invitations had links to online surveys in English, Spanish, Portuguese, Chinese, Haitian Creole, Vietnamese, Russian, Khmer, and Arabic for the 2022 and 2023 surveys. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. For members who were on file as being Spanish speakers, mailings also contained a Spanish survey. The response rate for the 2022 adult survey was 10.0%. The response rate for the 2023 adult survey was 8.5%.

Survey item responses were coded to a 0 to 100 scale (Never=0; Sometimes=33.33; Usually=66.67; Always= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. Respondent composite scores were averaged at the

state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

Communication Composite items and response options

<i>Communication Composite</i>	In the last 12 months, how often did this provider explain things in a way that was easy to understand?	Never
	In the last 12 months, how often did this provider listen carefully to you?	Sometimes
	In the last 12 months, how often did this provider show respect for what you had to say?	Usually
	In the last 12 months, how often did this provider spend enough time with you?	Always

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Communication Composite score were the 2022 and 2023 MassHealth Adult Primary Care Member Experience Surveys.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Patient-Provider Communication (Child, MassHealth)

Year	Score	CI_Low	CI_High
2021	90.8	90.5	91.2
2022	90.4	90.0	90.8

1. **Date:** 2/22/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Communication Composite score is a validated composite score on a 0-100 scale that is derived from 4 survey items. It captures parent or guardian experiences of communication with their child's provider in primary care pediatric visits. Higher scores denote better communication. Note that in the MassHealth Primary Care Member Experience Surveys for child members, there is also another composite that captures communication, the child-provider communication composite. However, this composite captures experiences of communication between the child member and the pediatrician, for child members who are old enough to communicate with their providers. This metric specification is for the Communication composite and not for the Child-Provider Communication composite.

The 2022 and 2023 MassHealth Primary Care Member Experience Surveys for child members (PC Child MES) were based on the CG-CAHPS 3.0 survey developed by the National Committee for Quality Assurance (NCQA) and the Agency for Healthcare Research and Quality (AHRQ).

- The 2022 PC Child MES had 63 items in the paper survey and 74 items in the web survey. The survey was fielded in February 2022 and sampled 154,822 child members.
- The 2023 PC Child MES had 63 items in the paper survey and 74 items in the web survey. The survey was fielded in May 2023 and sampled 165,760 child members.

The survey sample was randomly selected from a MassHealth sample frame that contained MassHealth child members (<18 years old) who were eligible to complete the survey. Eligibility requirements were that the member be actively enrolled in MassHealth, be attributed to an ACO that participated in the MassHealth program and have at least one primary care (pediatric) visit in the last year. Sample sizes were designed to yield a minimum of 400 completed surveys at the ACO level. Survey invitations were sent to the parents or guardians of child members by mail. Mailings contained a survey invitation with an English survey and an URL to access online surveys. In 2022 and 2023, online surveys were available in English, Spanish, Portuguese, Chinese, Haitian Creole, Vietnamese, Russian, Khmer, and Arabic. For child members who were on file as being Spanish speakers, mailings also contained a Spanish survey. The response rate for the 2022 child survey was 5.0%. The response rate for the 2023 child survey was 4.2%.

Survey item responses were coded to a 0 to 100 scale (Never=0; Sometimes=33.33; Usually=66.67; Always= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. Respondent composite scores were averaged at the

state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

Communication Composite items and response options

<i>Communication composite</i>	In the last 12 months, how often did this provider explain things about your child’s health in a way that was easy to understand?	Never
	In the last 12 months, how often did this provider listen carefully to you?	Sometime
	In the last 12 months, how often did this provider show respect for what you had to say?	Usually
	In the last 12 months, how often did this provider spend enough time with your child?	Always

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A202
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Communication Composite score were the 2022 and 2023 MassHealth Child Primary Care Member Experience Surveys.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Preventative Care Visit

Percentage of MA Residents Who Reported That They Had Visit to a General Doctor, Nurse Practitioner, Physician Assistant or Midwife for Preventive Care in the Past 12 Months			
Year	Sample Size	Estimated Population Size	Percent (%)
2021	5,000	5,330,307	77.8%
2023	5,266	5,480,297	81.3%

1. **Date:** 03/26/2024
2. **Data/Masurement and submission years:** 2021 and 2023.
3. **Description of metric:** Percent of Massachusetts residents who reported that they received care from a general doctor, nurse practitioner or physician assistant in the past 12 months for a check-up, physical examination or for other preventive care. For more information, please see 2023 [Massachusetts Health Insurance Survey \(MHIS\)_Methodology Report](#).
 - a. **Numerator & exclusions:** Non-Institutionalized Massachusetts residents reporting that they had a visit to a general doctor, nurse practitioner, physician’s assistant, or midwife for preventive care in the past 12 months.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents
 - c. **Imputation Method:** Missing values for key demographic variables for the target and target’s household members replaced through hot-deck imputation procedures.
 - d. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - e. **Imputation Method:** Missing values for key demographic variables for the target and target’s household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
5. **Data release:** Data is updated every two years.
6. **Data cost:** Publicly available.
7. **Validator & Source:** Nationally, 84.9% of adult (18+) residents reported that they had a doctor visit within the past 12 months based on 2023 [National Health Interview Survey](#) estimates.

Behavioral Health Screening (Adult, Commercial)

Year	Score	CI_Low	CI_High
2021	71.1	70.5	71.6
2022	74.1	73.6	74.7

1. **Date:** 3/7/2024
2. **Data/Measurement (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** Massachusetts patient-reported experiences of being screened for depression and anxiety during a primary care visit for commercially insured members, based on aggregate survey responses, on a 0-100 scale, derived from 2 survey items. Higher scores denote better experiences.

The 2022 and 2023 MHQP Patient Experience Surveys were based on the Clinician & Group Visit Survey 4.0 (beta) (CG-CAHPS Visit Survey) for adults and addressed multiple visit modes, including telehealth. The CG-CAHPS Visit Survey asked patients about their experiences with care at their most recent visit with an ambulatory care provider. It was used for synchronous visits – i.e., care that was delivered and received at the same time, in person, by phone, or by video. It was not used for care delivered through asynchronous methods, such as email or portal messages. The "beta" designation means that the instrument had not yet been field tested by the CAHPS Consortium or approved as a CAHPS survey. The 2022 adult and child PES instruments had 59 items and 73 items, respectively. The 2023 adult and child PES instruments had 50 items and 66 items, respectively.

In previous years, MHQP used a sample frame of patients who had a primary care visit that occurred within a 12-month period. In 2021, the criteria changed to a 6-month lookback period. The sample frame includes patients who had at least one primary care visit that occurred during the previous calendar year, typically between July and December. The survey is fielded from April through July. In 2022, the survey sampled 162,121 adult patients from 632 adult primary care practices statewide. In 2023, the survey sampled 159,047 adult patients from 645 adult primary care practices statewide. Physicians with a primary specialty designation of Internal Medicine, Pediatrics, Family Medicine or General Medicine and practicing as primary care providers, and nurse practitioners and physician assistants practicing as primary care providers, were eligible for the survey. Providers must also have had a panel size of at least 20 eligible patients across the participating health plans. Practices having at least three providers meeting these criteria were included. Using health plan claims visit data, each provider was classified as either "adult" or "child," based on the age of the majority of his or her patients in the sample pool (child=ages 0-17; adult=ages 18 and older). To ensure that only active patients of a provider were included, the survey instrument included initial questions that served to confirm that the patient considered the provider named on the survey to be their primary care provider; and the patient had at least one visit with that provider in the previous 6 months. Sample sizes were designed to provide information at the practice-site level. The survey pull was a standard random sampling of all eligible patients.

To be eligible for the survey, patients met the following criteria:

- Were currently enrolled in one of the participating commercial health plans;

- Was a commercial member in an HMO, POS, or PPO health plan product;
- Was age 18 and older to receive an adult survey; and
- Was a patient of a Massachusetts primary care providers.

Survey invitations were sent to patients by email, if a patient had a valid email, that had links to online surveys in English, Chinese, Portuguese, Russian and Spanish. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. The response rate to the 2022 adult survey was 14.7% and for the 2022 child survey 9.7%. The response rate to the 2023 adult survey was 15.2% and for the 2023 child survey was 9.4%.

Survey item responses were coded to a 0 to 100 scale (No=0; Yes=100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. If fewer than half of the questions had valid responses for a given respondent, then the composite could not be calculated and was considered missing. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

Adult Behavioral Health Composite items and response options

<i>Adult Behavioral Health</i>	During your most recent visit, did anyone in this provider’s office ask you if there was a period of time when you felt sad, empty, or depressed?	Yes No
	During your most recent visit, did you and anyone in this provider’s office talk about things in your life that worry you or cause you stress?	

- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Adult Behavioral Health Composite score are the 2022 and 2023 MHQP Massachusetts Patient Experience Surveys of commercially insured patients.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Behavioral Health Screening (Adult, MassHealth)

Year	Score	CI_Low	CI_High
2021	65.2	64.4	66.0
2022	66.6	65.8	67.4

1. **Date:** 2/22/2024
2. **Data/Measurement years (MY) and reporting years (RY):**
 - a. 2021 MY (2022 RY)
 - b. 2022 MY (2023 RY)
3. **Description of metric:** The Adult Behavioral Health composite score is a validated composite score on a 0-100 scale that is derived from 2 survey items. It captures patient experiences of being screened for depression and anxiety in primary care visits. Higher scores denote better experiences.

The 2022 and 2023 MassHealth Primary Care Member Experience Surveys for adult members (PC Adult MES) were based on the CG-CAHPS 3.0 survey developed by the National Committee for Quality Assurance (NCQA) and the Agency for Healthcare Research and Quality (AHRQ).

- The 2022 PC Adult MES had 57 items. The survey was fielded in February 2022 and sampled 117,455 adult members.
- The 2023 PC Adult MES had 57 items. The survey was fielded in May 2023 and sampled 121,352 adult members.

The survey sample was randomly selected from a MassHealth sample frame that contained MassHealth adult members (≥ 18 years old) who were eligible to complete the survey. Eligibility requirements were that the member be actively enrolled in MassHealth, be attributed to an ACO that participated in the MassHealth program and have at least one primary care visit in the last year. Sample sizes were designed to yield a minimum of 400 completed surveys at the ACO level. Survey invitations were sent to members by email, if a member had a valid email address on file with MassHealth. Email invitations had links to online surveys in English, Spanish, Portuguese, Chinese, Haitian Creole, Vietnamese, Russian, Khmer, and Arabic for the 2022 and 2023 surveys. Non-respondents were sent mailings of a survey invitation with an English paper survey and an URL to access online surveys. For members who were on file as being Spanish speakers, mailings also contained a Spanish survey. The response rate for the 2022 adult survey was 10.0%. The response rate for the 2023 adult survey was 8.5%.

Survey item responses were coded to a 0 to 100 scale (No=0; Yes= 100.00) at the respondent level and composites scores were calculated as a simple average of the response values for each of the component questions. Respondent composite scores were averaged at the state level to calculate the state-level composite score. State-level composite scores were not case-mix adjusted.

Adult Behavioral Health Composite items and response options

<i>Adult Behavioral</i>	Did anyone in this provider's office ask you if there was a period of time when you felt sad, empty or depressed?	Yes No
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<i>Health Composite</i>	Did you and anyone in this provider's office talk about things in your life that worry you or cause you stress?	
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- a. **Numerator & exclusions:** N/A
 - b. **Denominator & exclusions:** N/A
 - c. **Stratifier:** N/A
 - d. **Imputation method:** N/A
 - e. **Weighting Scheme:** N/A
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** The data sources for the Communication Composite score were the 2022 and 2023 MassHealth Adult Primary Care Member Experience Surveys.
 5. **Data cost:** No cost.
 6. **Data release:** Data is collected annually and released annually, usually in the fall.
 7. **Validator & source:** N/A
 8. **Notes:** Note that Commercial and MassHealth experience data are not comparable – provider networks, patient populations, and survey instruments are not aligned.

Equity Measures

Difficulty Obtaining Necessary Healthcare by Race/Ethnicity

Percent of MA Residents Reporting Difficulties Accessing Care in the Past 12 Months		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	32.0%
	Black, non-Hispanic	33.1%
	Asian, non-Hispanic	35.7%
	Other/multiple races, non-Hispanic	36.3%
	Hispanic	36.6%
	Total Population	33.0%
2023	White, non-Hispanic	40.4%
	Black, non-Hispanic	36.0%
	Asian, non-Hispanic	36.8%
	Other/multiple races, non-Hispanic	48.3%
	Hispanic	46.9%
	Total Population	41.2%

1. **Date:** 3/28/2024
2. **Data/Masurement and submission years:** 2021 and 2023.
3. **Description of metric:** Percent of Massachusetts residents who reported that they had difficulties accessing care in the past 12 months, defined in 2023 as the resident reporting any of the following difficulties: unable to get an appointment with doctor's office or clinic as soon as needed; unable to get an appointment with a specialist as soon as needed; doctor's office or clinic not accepting new patients; doctor's office or clinic not accepting insurance type; unable to get an appointment due to transportation issues. For more information, please see 2023 [Massachusetts Health Insurance Survey \(MHIS\)](#) Methodology Report.
 - a. **Numerator & exclusions:** Non-Institutionalized Massachusetts residents responding that they had any difficulties accessing care in the past 12 months.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents.
 - c. **Imputation Method:** Missing values for key demographic variables for the target and target's household members replaced through hot-deck imputation procedures.
 - d. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.

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- e. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - f. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
 5. **Data release:** Data is updated every two years.
 6. **Data cost:** Publicly available.
 7. **Validator & Source:** N/A

Usual Source of Care by Race/Ethnicity

Percent of MA Residents Who Reported Having a Usual Source of Healthcare (Excluding the Emergency Room)		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	90.8%
	Black, non-Hispanic	81.2%
	Asian, non-Hispanic	82.1%
	Other/multiple races, non-Hispanic	83.1%
	Hispanic	81.3%
	Total Population	88.1%
2023	White, non-Hispanic	90.6%
	Black, non-Hispanic	87.1%
	Asian, non-Hispanic	86.1%
	Other/multiple races, non-Hispanic	84.3%
	Hispanic	84.6%
	Total Population	88.9%

1. **Date:** 3/26/2024
2. **Data/Masurement and submission years:** 2021 and 2023.
3. **Description of metric:** Percent of Massachusetts residents who reported that they had a place to which they usually go when they are sick or need advice about their health other than the emergency department. For more information, please see 2023 [Massachusetts Health Insurance Survey \(MHIS\)](#) Methodology Report.
 - a. **Numerator & exclusions:** Non-institutionalized Massachusetts residents responding that they had a usual source of care, excluding the emergency department.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents
 - c. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - d. **Imputation method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - e. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.

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5. **Data release:** Data is updated every two years.
 6. **Data cost:** Publicly available.
 7. **Validator & source:** N/A

Residents Who Have a Primary Care Provider by Race/Ethnicity

Percentage of Massachusetts Residents Who Have a Primary Care Provider		
Year	Race/Ethnicity	Percent (%)
2023	White, non-Hispanic	93.3%
	Black, non-Hispanic	86.5%
	Asian, non-Hispanic	89.3%
	Other/multiple races, non-Hispanic	89.5%
	Hispanic	81.3%
	Total Population	90.9%

1. **Date:** 3/28/2024
2. **Data/Measurement and submission years:** 2023.
3. **Description of metric: Numerator & exclusions:** Percentage of non-Institutionalized Massachusetts residents responding that they had a primary care provider at the time of the survey.
 - a. **Denominator & exclusions:** Non-institutionalized Massachusetts residents.
 - b. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - c. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - d. **Risk Adjusted:** N/A
4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
5. **Data release:** Data is updated every two years.
6. **Data cost:** Publicly available.
7. **Validator & Source:** N/A

Preventative Care Visit by Race/Ethnicity

Percent of MA Population Who Visited a General Doctor, Nurse Practitioner, Physician Assistant or Midwife for Preventive Care in the Past 12 Months		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	81.0%
	Black, non-Hispanic	70.3%
	Asian, non-Hispanic	73.7%
	Other/multiple races, non-Hispanic	85.1%
	Hispanic	63.8%
	Total Population	77.8%
2023	White, non-Hispanic	84.7%
	Black, non-Hispanic	71.1%
	Asian, non-Hispanic	79.1%
	Other/multiple races, non-Hispanic	82.2%
	Hispanic	68.4%
	Total Population	81.3%

1. **Date:** 03/26/2024
2. **Data/Masurement and submission years:** 2021 and 2023.
3. **Description of metric:** Percent of Massachusetts residents who reported that they received care from a general doctor, nurse practitioner or physician assistant in the past 12 months for a check-up, physical examination or for other preventive care. For more information, please see 2023 [Massachusetts Health Insurance Survey \(MHIS\) Methodology Report](#).
 - a. **Numerator & exclusions:** Non-Institutionalized Massachusetts residents reporting that they had a visit to a general doctor, nurse practitioner, physician's assistant, or midwife for preventive care in the past 12 months.
 - b. **Denominator & exclusions:** Non-institutionalized Massachusetts residents
 - c. **Imputation Method:** Missing values for key demographic variables for the target and target's household members replaced through hot-deck imputation procedures.
 - d. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents and to address gaps in coverage in the survey frame. Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - e. **Imputation Method:** Missing values for key demographic variables for the target and target's household members and missing values for analytic variables used in calculation of final metric replaced through hot-deck imputation procedures.
 - f. **Risk Adjusted:** N/A

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4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
 5. **Data release:** Data is updated every two years.
 6. **Data cost:** Publicly available.
 7. **Validator & Source:** N/A

Avoidable Emergency Department (ED) Use by Race/Ethnicity

Percent Of MA Residents Who Reported That Their Most Recent Emergency Room Visit in The Past 12 Months Was for a Non-Emergency Condition		
Year	Race/Ethnicity	Percent (%)
2021	White, non-Hispanic	30.4%
	Black, non-Hispanic	52.4%
	Asian, non-Hispanic	N/A
	Other/multiple races, non-Hispanic	N/A
	Hispanic	39.9%
	Total Population	34.6%
2023	White, non-Hispanic	26.5%
	Black, non-Hispanic	47.9%
	Asian, non-Hispanic	N/A
	Other/multiple races, non-Hispanic	N/A
	Hispanic	51.3%
	Total Population	36.2%

1. **Date:** 3/25/2024
2. **Data/Measurement and submission years:** 2021 and 2023 Massachusetts Health Insurance Survey (MHIS)
3. **Description of metric:** Among residents with at least one Emergency Department (ED) visit in the past 12 months, percent who reported that their most recent ED visit could have been treated by a general doctor if one had been available, by age group and race/ethnicity, 2021 and 2023. For more information, please see the 2023 [Massachusetts Health Insurance Survey \(MHIS\) Methodology Report](#).
 - a. **Numerator & exclusions:** Massachusetts residents with an ED visit over the past 12 months who reported that their most recent ED visit could have been treated by a general doctor if one had been available
 - b. **Denominator & exclusions:** Massachusetts residents with an ED visit over the past 12 months
 - c. **Weighting Scheme:** The survey data were weighted to adjust for differential sampling probabilities, to reduce biases due to differences between respondents and nonrespondents (nonresponse bias), and to address gaps in coverage in the survey frame (coverage bias). Overall, the procedure executed for this study follows a two-step procedure which is to first correct for any disproportionate probabilities of selection (base weighting), such as oversampling based on targeted household characteristics, and then to balance the sample to match official statistics for persons living in Massachusetts on metrics such as age and gender (post-stratification weighting). In developing weights for the MHIS, the survey data were weighted first at the household level and then at the target-person level.
 - d. **Imputation method:** Missing values for key demographic variables for the target and target's household members replaced through hot-deck imputation procedures.
 - e. **Risk Adjusted:** N/A

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4. **Data source & status:** CHIA (March 2024). Findings from the [Massachusetts Health Insurance Survey](#) report.
 5. **Data cost:** Publicly available.
 6. **Data release:** Data released biennially.
 7. **Validator & Source:** N/A