NESCSO
New England States Consortium Systems Organization

ONPOINT
Health Data

The New England States' All-Payer Report on Primary Care Payments

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EXECUTIVE SUMMARY

In 2017, New England States Consortium Systems Organization (NESCSO), a nonprofit corporation organized and directed by the six New England states' health and human services agencies and the University of Massachusetts Medical School, formed a Primary Care Investment Workgroup ("Workgroup"). The Workgroup includes representatives from all six New England states – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Workgroup's main goal has been to advance a "Vision for Patient Centered Primary Care" by exploring opportunities for sharing state strategies and activities. During meetings over the past three years, the group has engaged in discussions regarding each state's approach to primary care payments, policy environments, data capabilities, and potential opportunities for collaboration.

In 2019, the Primary Care Investment Workgroup proposed to use "standardized" data to produce a "The New England States' All-Payer Report on Primary Care Payments" focused on how states incentivize and measure primary care payments as a percentage of total healthcare expenditures. The purpose of the report is to use standardized data to identify the percentage of all-payer primary care spending relative to overall healthcare spending in each state and to provide a framework to evaluate whether the states' investments in primary care reflect the importance and value of primary care in each state.

The Workgroup chose this focus with the intention of building on early evidence that an increased percentage of total payments invested in primary care is associated with improved quality, utilization, and cost outcomes. The Workgroup envisioned establishing a baseline of comparable information and benchmarks as an important tool to help guide their states' policies on primary care payments and to monitor the impact of those policies over time. In 2020, NESCSO agreed to finance the Workgroup's proposal by engaging Onpoint Health Data to provide the analytic services needed to support this project. The Milbank Memorial Fund provided supplemental funding in support of this project.

Methods

The approach to produce this report was to use a distributed model in which all states could use a single, standardized methodology to report comparable summary results from their respective all-payer claims databases (APCDs) and other non-claims data sources. Based on a review of previous studies, physician input, and the review and recommendations from participating NESCSO states, NESCSO and Onpoint defined specifications for summary reporting that states could apply to their APCD claims data (see Appendix 4 for a detailed review of the development process for measure and report specifications).

The specifications included definitions of provider specialty taxonomy codes and service procedure codes (i.e., Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS)) for use in the numerator (i.e., primary care payments), specification for inclusions and exclusions in the denominator (i.e., total healthcare expenditures), and a series of six claims-based summary report formats. These criteria were applied to "allowed" amounts on claims to measure payments.

Key Takeaways on Methodology

- Six New England states were able to use a distributed approach with standardized reporting templates to produce comparable information on primary care payments
- Standardized categories are needed to consistently account for Medicaid payments for non-medical support services across states
- Further work is needed to consistently track non-claims payments across states, particularly as value-based capitated payment models expand
- A consistent approach to tracking pharmacy payments is needed across states and should account for the impact of rebates

The primary care provider definition (Defined PCPs) included taxonomy codes for general practice, family medicine, pediatrics, internal medicine, nurse provider, and physician assistant.

OB/GYN services were included separately in order to gain an understanding of how they may influence the payments for primary care. OB/GYN services provided by OB/GYN providers and OB/GYN services provided by primary care providers were added to the definitions.

To calculate the primary care and OB/GYN payments numerator, four different measure definitions were developed (see Table 1). The specifications for these four definitions are provided in Appendix 5, which provides the taxonomy codes and the service procedure codes (CPT, HCPCS, and Uniform Billing (UB) revenue).

Table 1. Providers & Service Definitions Included in This Study

#	Definition	Description
1	Defined PCPs, Selected Services	• Selected claims payments for general practice, family medicine, pediatrics, internal medicine, nurse practitioner, physician assistant * • Excludes OB/GYN services • Definition #1 is narrower and service based
2	Defined PCPs, All Services	• All claims payments for general practice, family medicine, pediatrics, internal medicine, nurse practitioner, physician assistant * • Excludes OB/GYN services • Definition #2 is a broader measure that does not restrict on service codes
3	OB/GYNs, Selected OB/GYN Services	• All OB/GYN services payments for OB/GYN practitioners • Excludes all services provided by PCPs • Payments reported in Definition #3 can be added to definitions #1 or #2 as desired
4	Defined PCPs, Selected OB/GYN Services	• Selected OB/GYN services payments for general practice, family medicine, pediatrics, internal medicine, nurse practitioner, physician assistant * • Excludes all primary-care services and services provided by OB/GYNs • Payments reported in Definition #4 can be added to definitions #1 or #2 as desired

* Primary care also included taxonomy codes for Federally Qualified Health Centers, Rural Health Centers, clinics, Critical Access Hospitals, and rural hospitals. For these taxonomy codes, restrictions were always applied using revenue and procedure codes.

Since non-claims payments usually are not reported to the states' APCDs, information regarding these payments were collected directly from payers. To accomplish this, Onpoint designed a data collection template to assist states in gathering and reporting the non-claims payments from payers. The template provided a list of categories for non-claims payments and definitions for each category that were agreed to by NESCSO study participants. The intent was to make it easier for payers to report these types of payments in a more standardized manner.

Total medical payments for this study excluded retail pharmacy from the denominator due to limitations in the completeness and reliability of retail pharmacy data.

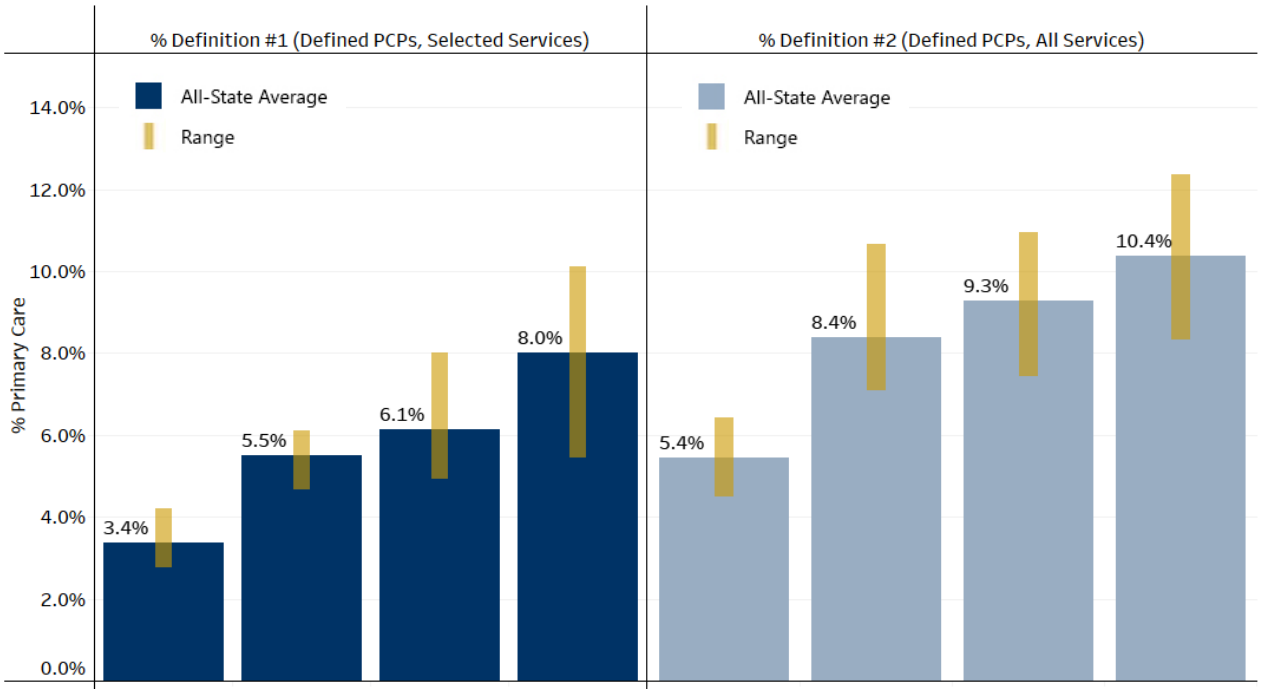
! *Note that results cannot be compared directly to results generated by specific states or other reports that used different methods.*

Results & Findings

This is the first multi-state report of all-payer primary care payments across the six New England states using a standardized methodology. The methods were derived from the conceptual work of Bailit (supported by the Milbank Memorial Fund), consideration of other prior studies, and input from each of the six New England states, NESCSO, Onpoint, and physician and other consultants. Provider taxonomy codes and procedure codes, including those used by Medicaid and Medicare, were extensively reviewed and updated. A distributed model was used, allowing states to produce summary data according to specifications in a timely manner without requiring unit-record data to leave the state. Among the results:

- The six New England states successfully implemented the standardized measures using APCD data across all payer types, resulting in a study based on 7.2 million Commercial, Medicare Advantage, Medicare Fee-for-Service, and Medicaid members using data from the most current data year available (2018 for five of the six states).
- The all-payer combined primary care payments as a percentage of total medical payments was 5.5% using the narrower Definition #1 (Defined PCPs, Selected Services) and 8.2% using the broader Definition #2 (Defined PCPs, All Services) – results that fell within the range of other published studies on the percentage of primary care payments (see Figure 1).

Figure 1. Primary Care Percentage of Total Medical Payments by Payer Type, 2018 *

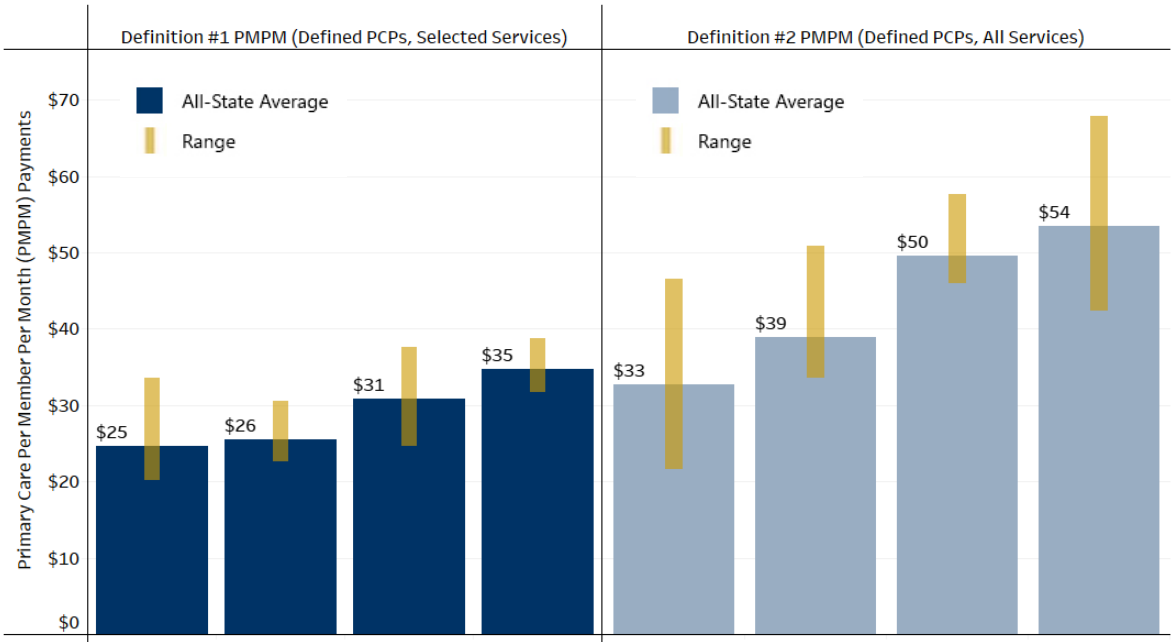


	Medicare FFS	Medicare Advantage	Commercial	Medicaid	Medicare FFS	Medicare Advantage	Commercial	Medicaid
All-State Average	3.4%	5.5%	6.1%	8.0%	5.4%	8.4%	9.3%	10.4%
Lowest Value	2.8%	4.7%	4.9%	5.4%	4.5%	7.1%	7.4%	8.3%
Highest Value	4.2%	6.1%	8.0%	10.1%	6.4%	10.7%	11.0%	12.4%

* Massachusetts data for 2018 were not available. Commercial results for Massachusetts were for 2017, and Medicaid results were for 2016. Massachusetts did not report Medicare FFS or Medicare Advantage data. Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

- The amount of primary care payments as a percentage of total medical payments were lower for the older Medicare population than for the younger Commercial and Medicaid populations, but actual per member per month (PMPM) payments going to primary care were higher for the Medicare Advantage and Medicare Fee-for-Service (FFS) populations. Although understanding the relationship between the percent of primary care payments and the PMPM payments associated with primary care is beyond the scope of this report, achieving a better understanding of this relationship and the association of these investments with better outcomes is a topic worthy of further study (see Figure 2).

Figure 2. Primary Care PMPM Payments by Payer Type, 2018, 2018 *



All-State Average	$25	$26	$31	$35	$33	$39	$50	$54
Lowest Value	$20	$23	$25	$32	$22	$34	$46	$42
Highest Value	$34	$31	$38	$39	$47	$51	$58	$68

* Massachusetts data for 2018 were not available. Commercial results for Massachusetts were for 2017, and Medicaid results were for 2016. Massachusetts did not report Medicare FFS or Medicare Advantage data. Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

- Inclusion of OB/GYN providers and services resulted in a very small increase (less than 1%) in the percentage of overall primary care payments.
- A broader range of providers that are sometimes considered as primary care (e.g., naturopaths, behavioral health providers) were not included in this study.
- Although there is an expectation that non-claims payments (value-based payments) to primary care practices will increase over time, these payments usually are not reported to APCDs, and states must collect this information directly from the payers. This has proven to be extremely challenging since there are few states, if any, that have developed standards regarding the collection of non-claims payment information.
- The highest primary care payments based on provider specialty in the more densely populated southern New England states was internal medicine, while the highest primary care payments based on provider specialty across the less densely populated northern New England states was family medicine. This highlights the need for further analysis to better understand how more urbanized areas with a larger number of health systems, higher bed supply, and access to specialists might be delivering care and investing in primary care compared to more rural areas.

Key Findings Across All 6 States

- 5.5% of total payments went to primary care using the narrower Definition #1 (Defined PCPs, Selected Services)
- 8.2% of total payments went to primary care using the broader Definition #2 (Defined PCPs, All Services)
- Further investigation is needed regarding how to examine primary care payments as both the percentage of total payments and the PMPM going to primary care. These can potentially reveal different results and insights across payers and states.
- Results of primary care payments varied by payer type and across states. Additional work is needed to understand how relative payments (e.g., percent of total cost of care, primary care per member per month) are correlated with population-level outcomes such as measures of health status, rates of recommended care, rates of low-value care, avoidable acute care, and growth in payments.

NESCSO Study Strengths & Challenges

This NESCSO project, which represents the first multi-state project reporting on primary care payments, has many strengths, including the following:

- All six states had existing APCD data or had access to other state data sources (e.g., Medicaid) to generate the necessary data.
- The project demonstrated the use of a distributed model, which facilitated quicker turnaround, allowed states to develop their own code for future iterations or additional analyses, and allowed states to use local knowledge of payer data to adjust specifications when needed.
- Standardized specification and summary report formats were provided to and returned by all six states.
- While individual states had input into specifications, a single independent entity, NESCSO, determined the final specification and methods to ensure consistency.
- A robust quality-control process ensured that states generated submitter-/payer-specific data and then made corrections based on review of their data with NESCSO and Onpoint.

Some challenges identified during the course of this study include the following factors:

- Not all states had complete data for Commercial, Medicaid, and Medicare payers.
- The latest year of available data was not consistent across all states.
- States and payers varied in the services covered by benefits or reimbursement rates – a factor that was not evaluated in this study.
- Non-claims data was not reported through APCDs and was collected directly by the states from payers.
- Data on pharmacy expenditures and rebates was not sufficiently available or reliable to be included in the report.
- Linkage on member ID between eligibility, medical claims, and pharmacy claims was not done in this baseline study, and some states may vary in their ability to do this linkage for some payer types.

Discussion & Recommendations

The purpose of this study was to produce a baseline report of all-payer primary care payments and total healthcare cost across six New England states using state APCD data by applying a standardized methodology to collect the data. Each of the six states successfully completed this work. Results, as in other studies, indicated that payments to primary care as a percentage of total healthcare expenditures was low – 5.5% using the narrower Definition #1 (Defined PCPs, Selected Services) and 8.2% using Definition #2 (Defined PCPs, All Services) – and that ranges varied significantly by state and by payer type (i.e., Commercial, Medicare Advantage, Medicare FFS, Medicaid). The causes of these variations were not determined as part of this baseline descriptive study.

Based on the findings from this study, NESCSO recommends that states address specific policy and technical issues to improve data collection processes in order to ensure that the data is useful in evaluating the potential impact of increasing primary care payments as a means to improve quality and reduce costs. These recommendations include the following:

- Policy issues recommended for states
  - **Standardize an approach to collecting data related to non-claims payments.**
    - Given the increasing use of non-claims payments, states should expand efforts through legislation, regulations, or other mechanisms to require reporting of non-claims data by states and payers at the member level or most granular level possible.
    - Collaborate with other organizations already initiating methods to develop improved tracking of non-claims healthcare payments.
  - **Standardize a more consistent approach to reporting on Medicaid services and payments**.
    - Define more consistently the total amount of Medicaid payments, on behalf of Medicaid beneficiaries, that are designated to support primary care practices, whether through Medicaid managed care or Medicaid FFS.
  - **Standardize an approach that incorporates both the percentage of total cost of care and per member per month (PMPM) payments going to primary care** to better understand how each of these alone or in combination is associated with desirable population-level outcomes.

- Technical issues recommended for health policy researchers
  - **Develop a standardized approach to evaluating the association between primary care payments and performance outcomes.**
    - Examine the relationships between primary care payments and outcomes (e.g., total payments, inpatient use, avoidable use and overuse, underuse and gaps in care, access to care, and health status) to inform decision-making policy related to payment in primary care. Inventory what data states are already producing or can easily generate for outcome measures. Consider performing analyses subset to specific populations (e.g., members with diabetes or other chronic diseases) as well as analyses by geographical regions within each state.
  - **Develop a plan to track and collect payment information in regard to "remote care management."**
    - Include telehealth and remote monitoring.
    - Will new service codes be necessary to track remote care management visits and be included as part of primary care payments?
  - **Standardize an approach to incorporating pharmacy expenditures in total healthcare expenditures.**
    - Link retail pharmacy using member identification, including carve-outs, and explore feasibility of capturing non-claims pharmacy rebate data.
  - **Measure the impacts of COVID-19 on primary care payments, total healthcare expenditures, and other outcome measures.**
    - Given the interruption of services and the transition to virtual visits, the comparability of 2020 data to previous and future years should be considered.
    - Many new codes are being implemented to report COVID-related services. These should be considered in future analyses to accommodate the growing number of telehealth / virtual visits.
  - **Plan to evaluate the broader Definition #2 (Defined PCPs, All Services) of primary care used in the current study.**
    - Identify more specifically those additional services and procedure codes that were included in Definition #2 of this study.
    - Identify which of those services had the greatest impact leading to the increase in the percent of primary care payments.

BACKGROUND & GOALS

NESCSO

NESCSO is a nonprofit corporation organized and directed by the health and human services agencies in the New England states – Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont – and the University of Massachusetts Medical School. The mission of the organization is to strengthen and support the capacity of state government agencies. One way in which NESCSO pursues this mission is through state peer-to-peer learning communities. In 2016, NESCSO held a forum for New England state government representatives to discuss available policy and regulatory tools that states can use to respond to changes in the healthcare markets and to explore opportunities for regional collaboration. This initial meeting led to the development of four workgroups focused on a specific tool States use to impact or monitor the healthcare market: Market Oversight; Data; Community Benefit, and Primary Care Investment.

The Primary Care Investment Workgroup ("Workgroup"), led by Richard Slusky, former Director of Payment Reform for the Vermont Green Mountain Care Board, is focused on how states incentivize and measure healthcare payers' primary care payments as a percentage of overall healthcare expenditures. There is representation from every New England state on the Workgroup.

NESCSO Primary Care Payment Project Goals

In July 2017, Bailit, Friedberg, and Houy published a report sponsored by the Milbank Memorial Fund titled "Standardizing the Measurement of Commercial Health Plan Primary Care Spending." The report outlines a methodological approach to measuring "primary care spending rates" (i.e., the portion of total healthcare expenditures that goes to primary care) and provides some preliminary answers using information from Commercial insurers. The report can be accessed here: https://www.milbank.org/publications/standardizing-measurement-commercial-health-plan-primary-care-spending.

In 2019, the Patient Centered Primary Care Collaborative (now the Primary Care Collaborative, or PCC) included in its Consensus recommendations the following: "Primary care payment should be tracked and reported through a standardized measure. Long-term, systemic change demands a system that ensures a standardized measurement at the health plan level across all payers to track and publicly report primary care payment. This data is essential to demonstrate that increases in payment lead to improved quality."

The goal of this NESCSO project was to produce a standardized, all-payer "Multi-State Report on Primary Care Payments" that can be replicated from year to year. The report will build on the methodologies suggested in the Milbank-Bailit study and the recommendations of the PCC as noted at the following link: https://www.pcpcc.org/resource/consensus-recommendations-increasing-primary-care-investment.

This report uses standardized data provided by participating New England states reflecting both public and private insurer payments. The report:

- Allows each participating state to understand the percent of primary care payments relative to total healthcare expenditures in their state
- Provides a comparison to other participating states

- Provides an objective foundation for multi-state discussions regarding state actions that might be taken to establish targets for primary care expenditures, measures of success, and the data needed to support this effort and future initiatives
- Provides state legislators and others with reliable data to better understand their state's commitment to primary care payments and how their state's efforts compare to other states in New England or across the country
- Provides a benchmark for legislators and policymakers to consider when establishing targets for payments in primary care expenditures in their state
- Makes recommendations regarding how to evaluate whether the percent of payment in primary care appears to have impacted cost growth, access to healthcare services, or the quality of care and healthcare outcomes in each state

Specific tasks included the identification of available data sources, the definition of methods for measuring primary care payments from APCD claims data and non-claims data, the collection of summary reporting by payer type (i.e., Commercial, Medicare Advantage, Medicare FFS, Medicaid) from each participating state, the analysis of results, recommendations for future and ongoing analyses, and the preparation of a written report.

NESCSO selected Onpoint Health Data to support the work on this project. A nonprofit based in Portland, Maine, Onpoint has extensive experience with APCD claims data preparation and analysis for all six New England states and other states. Onpoint has worked on multiple primary care projects for states, including national patient-centered medical homes (PCMH) and Comprehensive Primary Care Plus (CPC+) initiatives for the U.S. Centers for Medicare & Medicaid Services (CMS) and has participated in stakeholder groups focused on primary care. Onpoint's consultant for this project, Craig Jones, MD, is a nationally recognized leader in PCMH and other primary care initiatives.

Distributed Model

The Milbank-Bailit study used a distributed model to provide a specification to retrieve summary data results from Commercial payers. In the same way, a distributed model was selected for this NESCSO project. In collaboration with physician and other consultants, NESCSO and Onpoint reviewed specifications for methods and summary report formats with the participating states. Each state then prepared the data from their APCD or, in a few cases, from payer data housed outside of the APCD. A form to collect non-claims primary care payments and payments from each state also was developed and supplied to the states. (See the "Distributed Model" section in this report's "Discussion of Methodology & Findings" for a review of the advantages and challenges of the distributed model.)

What was Measured?

There is no national standard on measurement of primary care payments, and no two studies have used the same methods. As in the Milbank-Bailit study, NESCSO and the participating states sought to measure primary care payments as a percentage of total healthcare expenditures using both a narrower service-based definition and a broader measure with no service code restrictions. These are referred to as the narrower Definition #1 (Defined PCPs, Selected Services) and the broader Definition #2 (Defined PCPs, All Services). The NESCSO study developed a list of provider specialty taxonomy codes not included in the Milbank-Bailit study and added an expanded list of procedure codes that included codes billed by Medicaid and Medicare that were not listed in the Milbank-Bailit study.

! *It is important to note that standard claims data contain no coded field or value within a coded field that identify that a specific service took place in a primary care setting.*

Since the study sought to measure primary care payments as a percentage of total healthcare expenditures, it is important to highlight that the measure results were impacted by how the denominator (total healthcare expenditures) was specified and created. Variances in the construction of total healthcare expenditures could influence comparisons between states and to other previous studies. A good example is the decision whether to include pharmacy payments, which is difficult to compare across states without detailed information on the impact of rebates.

Finally, as other previous studies have demonstrated, the measure results in this study were influenced strongly by payer mix and patient age. Although older people had higher primary care utilization and payments (numerator), they also had much higher total healthcare expenditures, including higher rates of use of all other non-primary care services compared with younger populations. This resulted in a lower percentage of primary care payments for Medicare beneficiaries as compared to younger populations despite a higher PMPM payment.

Primary Care Payments – Claims Based

To calculate the primary care expenditure numerator, four different measure definitions were developed, corresponding to the narrower and broader definitions used for this study. The specifications for these four definitions are summarized below in Table 2 and provided in full detail in Appendix 5, which provides the taxonomy codes and provides the service procedure codes (CPT, HCPCS, and UB revenue).

Table 2. Providers & Service Definitions Included in This Study

#	Definition	Description
1	Defined PCPs, Selected Services	• Selected claims payments for general practice, family medicine, pediatrics, internal medicine, nurse practitioner, physician assistant * • Excludes OB/GYN services • Definition #1 is narrower and service based
2	Defined PCPs, All Services	• All claims payments for general practice, family medicine, pediatrics, internal medicine, nurse practitioner, physician assistant * • Excludes OB/GYN services • Definition #2 is a broader measure that does not restrict on service codes
3	OB/GYNs, Selected OB/GYN Services	• All OB/GYN services payments for OB/GYN practitioners • Excludes all services provided by PCPs • Payments reported in Definition #3 can be added to definitions #1 or #2 as desired
4	Defined PCPs, Selected OB/GYN Services	• Selected OB/GYN services payments for general practice, family medicine, pediatrics, internal medicine, nurse practitioner, physician assistant * • Excludes all primary-care services and services provided by OB/GYNs • Payments reported in Definition #4 can be added to definitions #1 or #2 as desired

* Primary care also included taxonomy codes for Federally Qualified Health Centers, Rural Health Centers, clinics, Critical Access Hospitals, and rural hospitals. For these taxonomy codes, restrictions were always applied using revenue and procedure codes.

Selected service exclusions were applied consistently across all definitions. In addition to other exclusions previously described, inpatient claims and outpatient emergency department claims were excluded from the primary care expenditure numerator. Whenever possible, the rendering provider's reported taxonomy on the claim service line was used first. If that was unavailable or missing, the rendering provider's primary taxonomy

from the most recent version of the National Plan and Provider Enumeration System (NPPES) was used to identify the taxonomy.

The primary care provider definition included taxonomy codes for general practice, family medicine, pediatrics, internal medicine, nurse provider, and physician assistant. Specific sub-specialties by taxonomy code are provided in Appendix 5. Primary care services included office visits, preventive visits, visit codes used by public payers, consultation services, selected preventive services, telehealth services, immunization services, chronic care management services, advanced care planning, prolonged services, and home visits.

Services that may be performed by OB/GYNs or, in some cases, by primary care providers included contraception insertion and removal, newborn care services, selected gynecological services, delivery, antepartum, and postpartum care services. Specific service codes are provided in Appendix 5.

Not all primary care services are billed on professional claims. In some cases, providers bill and payers process and pay for primary care services on facility claims. For these claims, it is not always possible to determine the exact specialty of the provider. Rather the provider is identified as a Federally Qualified Health Center (FQHC), a Rural Health Center (RHC), a Critical Access Hospital (CAH), a clinic, or a rural hospital. The taxonomy codes for these providers were included but were restricted by procedure codes (i.e., CPT, HCPCS, and UB revenue codes) for all NESCSO definitions. This information is also provided in Appendix 5.

Primary Care Payments – Non-Claims Based

While some states have begun collecting this type of information from payers, most have not. NESCSO built a reporting template for the states to collect information by category from payers with the hope that this template could be used as a basis for the collection of non-claims payment data from all payers in a more standardized manner. This included the collection of the following types of information:

- Capitated or salaried payments
- Risk-based reconciliation
- Patient-centered primary care homes (PCPCHs) / medical homes (PCMHs)
- Provider incentives (retrospective and prospective) for performance-based payments
- Health information technology (HIT) structural changes
- Workforce payments

RAND Corporation recently completed a 2020 research report that provides detailed background and proposals for collecting non-claims expenditure and payment data. For details, see “Advancing the Development of a Framework to Capture Non-Fee-for-Service Health Care Spending for Primary Care” (Carman, Reid, Damberg), which was supported by the Milbank Memorial Fund and which may be of relevance to such considerations: https://www.rand.org/pubs/research_reports/RRA204-1.html.

RESULTS

Study Populations

The study included a total of 7.2 million Commercial, Medicare Advantage, Medicare FFS, and Medicaid members in 2018 (except for Massachusetts, which reported 2017 Commercial and 2016 Medicaid data). Table 3 provides the count of unique members and member months reported by state and payer type.

Table 3. Members & Member Months (in Parentheses) in APCD Study Populations by State, 2018 *

State	Commercial †	Medicare Advantage	Medicare FFS	Medicaid ‡
Connecticut (CT)	987,744 (10,170,446)	271,829 (2,933,551)	455,810 (3,836,091)	N/A
Maine (ME)	525,803 (4,452,334)	147,956 (1,249,646)	228,470 (2,399,413)	228,749 (1,959,397)
Massachusetts (MA) *	1,553,688 (15,813,549)	N/A	N/A	623,154 (5,988,136)
New Hampshire (NH)	467,899 (4,829,664)	39,384 (420,743)	234,510 (2,643,439)	131,969 (1,259,028)
Rhode Island (RI)	338,873 (3,552,021)	81,186 (901,157)	121,546 (1,389,456)	176,619 (1,797,315)
Vermont (VT)	219,848 (2,336,870)	15,602 (171,184)	135,583 (1,533,881)	179,330 (1,887,711)

* Massachusetts data for 2018 were not available. Commercial results for Massachusetts were for 2017, and Medicaid results were for 2016. Massachusetts did not report Medicare FFS or Medicare Advantage data.

† The Commercial population in this study was impacted by the U.S. Supreme Court's *Gobeille vs. Liberty Mutual Insurance Company* decision, which reduced the volume of self-insured data that Commercial plans submitted to state APCDs.

‡ Based on discussion with NESCSO states, Medicaid managed care and Medicaid FFS were not reported separately in this report. Medicaid results for Massachusetts, New Hampshire, and Rhode Island were comprised of only Medicaid managed care. Maine and Vermont were comprised of only Medicaid FFS, some components of which include managed care components. Connecticut's APCD currently does not collect the full complement of Medicaid data; CT Medicaid data therefore has not been included in this reporting to ensure uniform analysis.

Primary Care Payments as a Percentage of Total Healthcare Expenditures by Payer Type (Excluding Pharmacy)

Table 4 provides the average of the rates across the six states by payer type. Detailed measure rates by payer type and individual state are provided in figures 3–6, below, and Appendix 2. Within payer types, there was significant rate variation by state. For this project, rates were not adjusted for age, gender, provider reimbursement rates, or other factors that might explain differences between payer types or states within payer types.

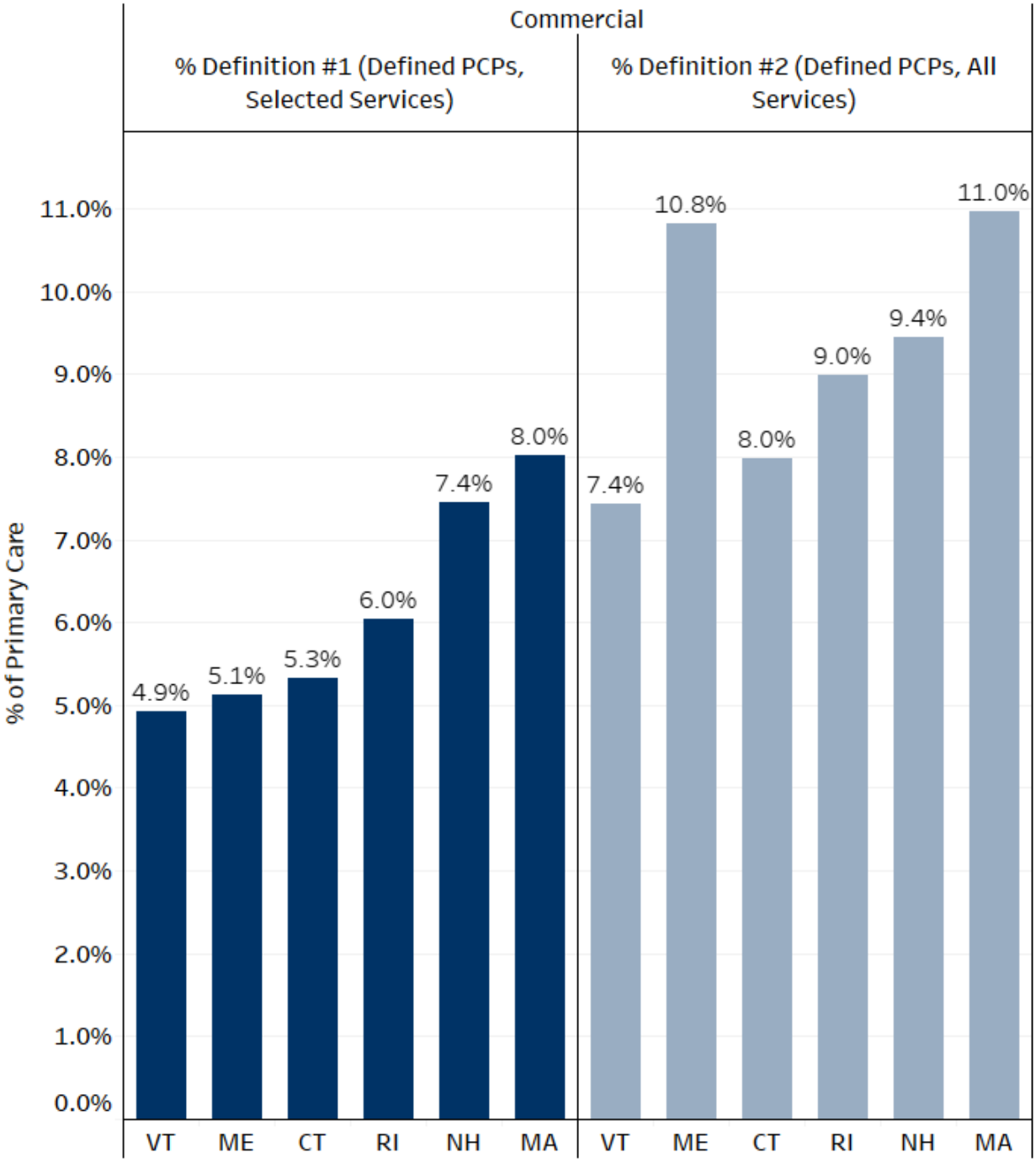
More than 7 million members incurred more than $36 billion in allowed payments on medical claims. Across all six New England states and all payer types, the all-payer combined primary care percentage of total medical payments was 5.5% using the narrower Definition #1 (Defined PCPs, Selected Services) and 8.2% using the broader Definition #2 (Defined PCPs, All Services) – results that fell within the range of other published studies (see Appendix 7 for a review of other published studies). Inclusion of OB/GYN providers and selected OB/GYN services added less than 1% to the estimate of primary care services as a percent of total healthcare expenditures.

Table 4. Average (Mean) of State Rates for Primary Care Payments, 2018 *

Payer Type	% Definition #1 (Defined PCPs, Selected Services)	% Definition #2 (Defined PCPs, All Services)	% Definition #3 (Defined OB/GYNs, Selected OB/GYN Services)	% Definition #4 (Defined PCPs, Selected OB/GYN Services)	Definition #1 (Defined PCPs, Selected Services) PMPM	Definition #2 (Defined PCPs, All Services) PMPM
Commercial	6.1% (4.9% – 8.0%)	9.3% (7.4% – 11.0%)	0.59% (0.41% – 0.82%)	0.06% (0.03% – 0.09%)	$25.53 ($22.56 – $30.56)	$38.91 ($33.53 – $50.87)
Medicare Advantage	5.5% (4.7% – 6.1%)	8.4% (7.1% – 10.7%)	0.01% (0.00% – 0.02%)	0.00% (0.00% – 0.01%)	$34.75 ($31.69 – $38.74)	$53.52 ($42.37 – $67.87)
Medicare FFS	3.4% (2.8% – 4.2%)	5.4% (4.5% – 6.4%)	0.02% (0.01% – 0.02%)	0.00% (0.00% – 0.01%)	$30.87 ($24.64 – $37.61)	$49.63 ($45.97 – $57.64)
Medicaid	8.0% (5.4% – 10.1%)	10.4% (8.3% – 12.4%)	0.71% (0.31% – 1.14%)	0.10% (0.03% – 0.18%)	$24.67 ($20.16 – $33.57)	$32.75 ($21.67 – $46.58)

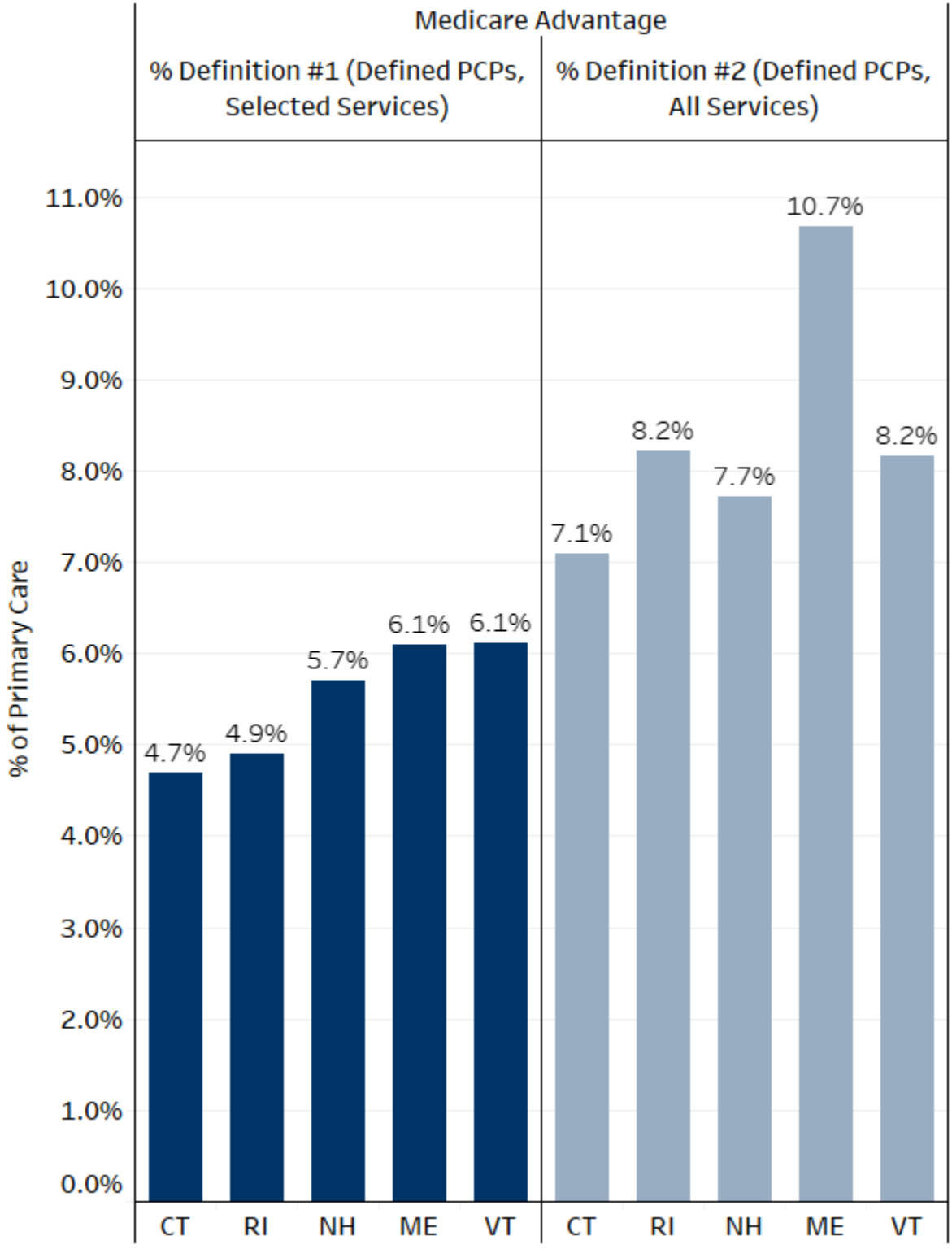
* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Figure 3. Primary Care Percentage of Total Medical Payments by State, 2018 – Commercial *



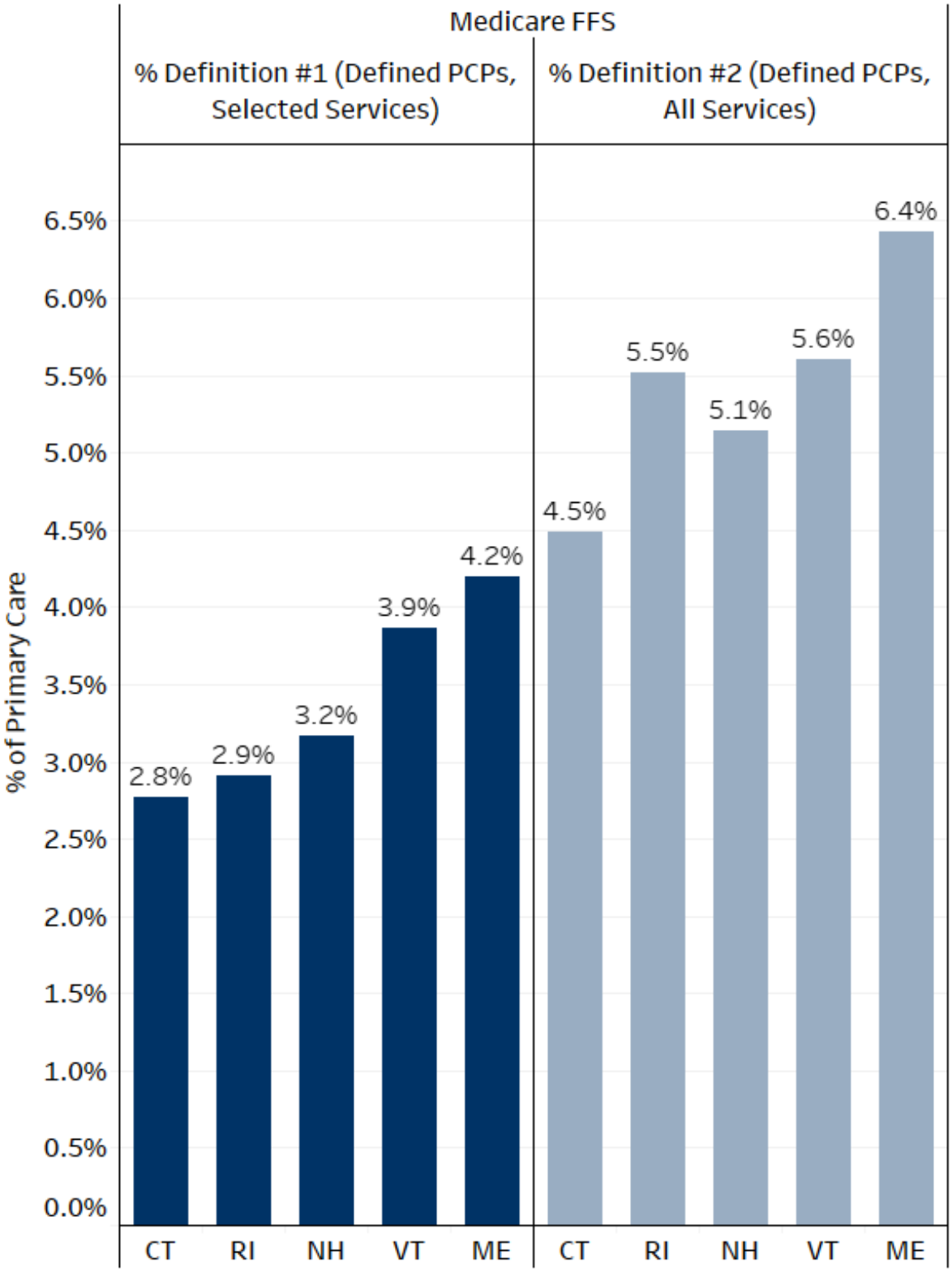
* Massachusetts data: Commercial (2017)

Figure 4. Primary Care Percentage of Total Medical Payments by State, 2018 – Medicare Advantage *



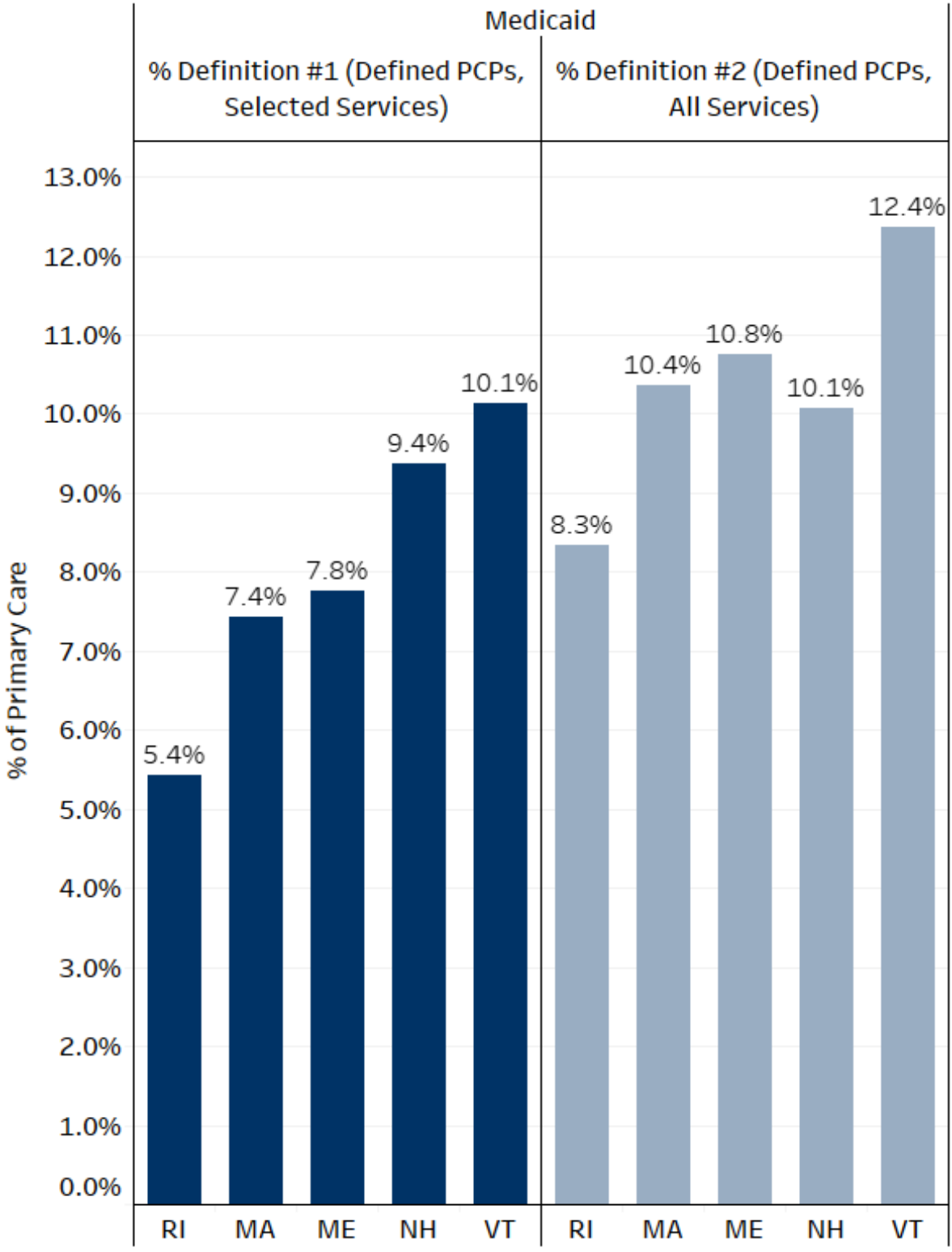
* Massachusetts did not report Medicare data

Figure 5. Primary Care Percentage of Total Medical Payments by State, 2018 – Medicare FFS *



* Massachusetts did not report Medicare data

Figure 6. Primary Care Percentage of Total Medical Payments by State, 2018 – Medicaid *

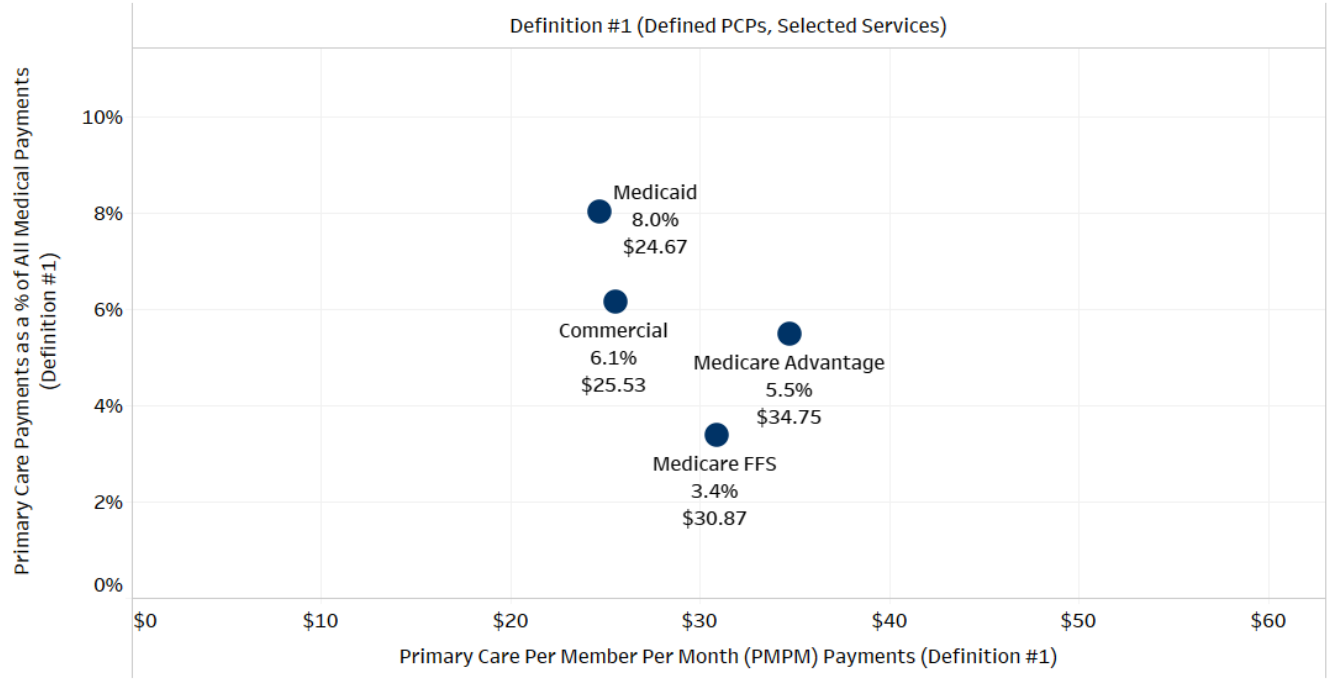


* Massachusetts data: Medicaid (2016); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Figure 7 and Figure 8 demonstrate the association between the percentage of total payments going to primary care (y-axis) and the rates per member per month (PMPM) of payments going to primary care (x-axis) for definitions 1 and 2, respectively. Although the NESCSO study did not use members' eligibility data to link medical and pharmacy claims, the data specifications did include the reporting of medical member months and medical claims without linking on member ID. Having this information on medical member months and medical claims allowed the calculation of an overall aggregate PMPM by payer and by age and gender. Although future studies may link eligibility to claims, we believe these estimated PMPM calculations provide sufficient information to warrant further study regarding the relationship between the percent of total healthcare payments going to primary care and the primary care PMPM, including the following:

- For each payer group, there was significant variation across states for both the % of Total Payments and the PMPM that went to primary care. (Note that state-specific PMPM results by payer type are not included in this report. Neither the % of Total Payments or the primary care PMPM rates by payer type have been adjusted for age, gender, variation in reimbursement rates, or other factors.)
- Aggregate results by payer type suggest that payer types with a higher % of Total Payments to primary care paid a lower PMPM for primary care. In this study, Medicaid and Commercial payers tended to pay a higher % of Total Payments, while Medicare FFS and Medicare Advantage tended to pay a higher PMPM.
- The results highlight the need to look at both % of Total Payments and PMPM to better understand how to evaluate payments that are going to primary care. For example, Medicare FFS and Medicare Advantage beneficiaries had high overall expenditures and evaluating the % of Total Payments in isolation would not provide the full picture of comparative payment going to primary care.
- Although it was beyond the scope of this evaluation, the results also highlight a need for further work to understand what is driving these variations in primary care payment across states and payer types, and whether a particular method of evaluating primary care payment (e.g., % of Total Payments, PMPM, a blend of both) is more closely associated with better outcomes.

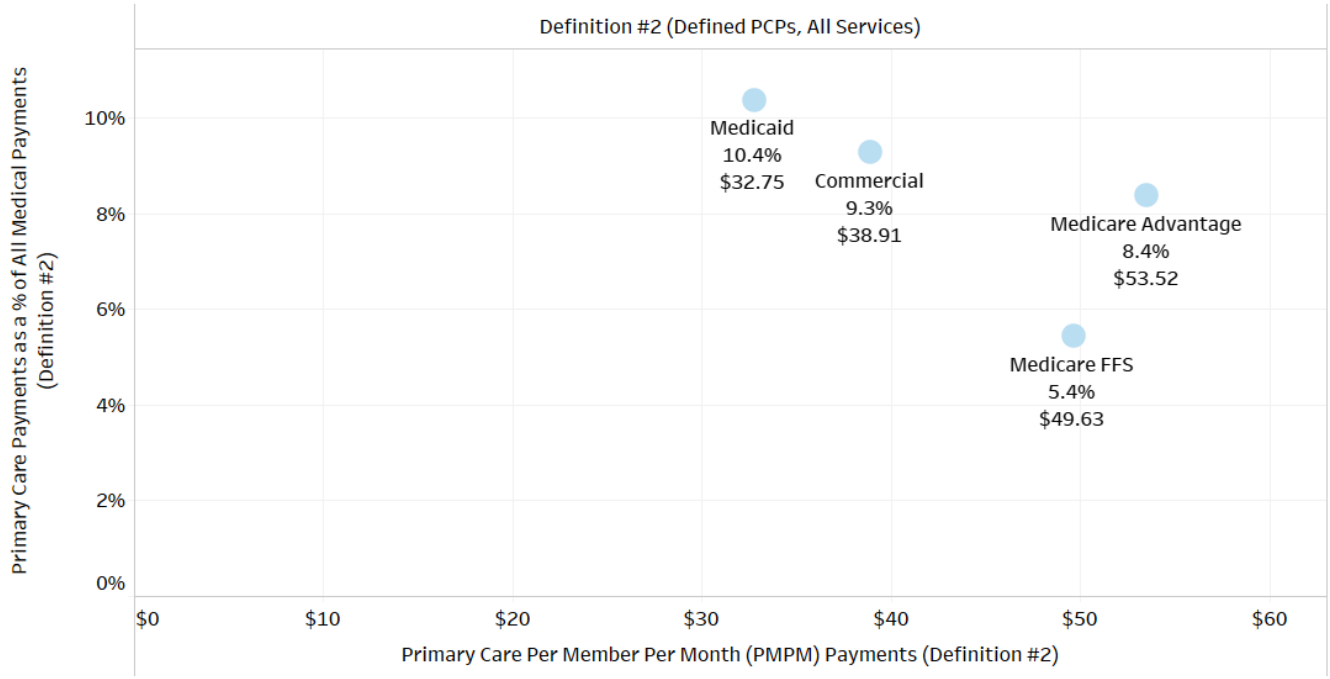
Figure 7. Association between Primary Care Percentage of Total Medical Payments & Primary Care Payments PMPM, Averaged Across States, 2018 – Definition #1 (Defined PCPs, Selected Services) *



		Commercial	Medicaid	Medicare Advantage	Medicare FFS
% Primary Care	All-State Average	6.1%	8.0%	5.5%	3.4%
	Lowest Value	4.9%	5.4%	4.7%	2.8%
	Highest Value	8.0%	10.1%	6.1%	4.2%
PMPM	All-State Average	$26	$25	$35	$31
	Lowest Value	$23	$20	$32	$25
	Highest Value	$31	$34	$39	$38

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Figure 8. Association between Primary Care Percentage of Total Medical Payments & Primary Care Payments PMPM, Averaged Across States, 2018 – Definition #2 (Defined PCPs, All Services) *



		Commercial	Medicaid	Medicare Advantage	Medicare FFS
% Primary Care	All-State Average	9.3%	10.4%	8.4%	5.4%
	Lowest Value	7.4%	8.3%	7.1%	4.5%
	Highest Value	11.0%	12.4%	10.7%	6.4%
PMPM	All-State Average	$39	$33	$54	$50
	Lowest Value	$34	$22	$42	$46
	Highest Value	$51	$47	$68	$58

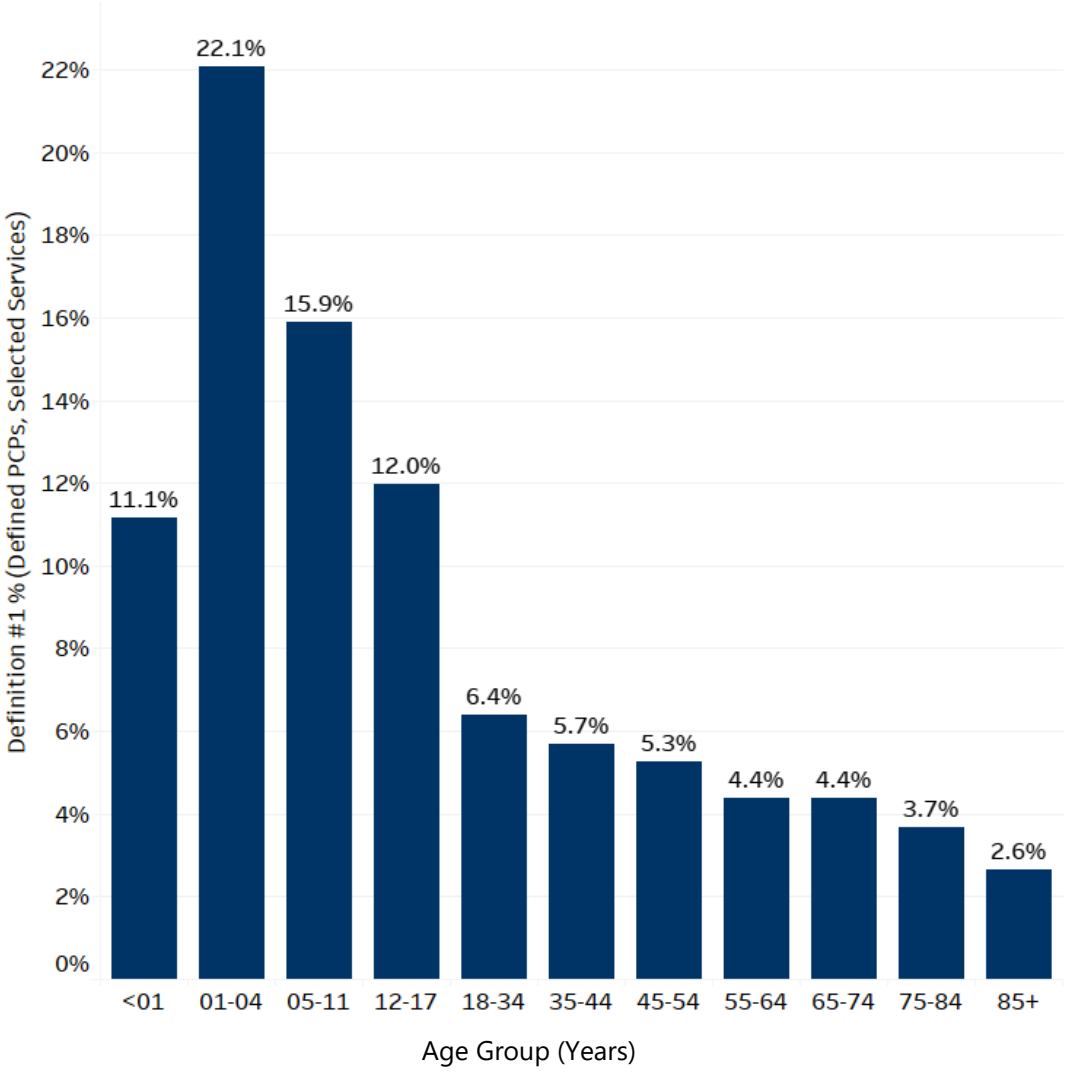
* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Primary Care Payments by Gender & Age

Detailed results by payer type and gender within age groups were provided by each state, resulting in more than 400 rows of summarized data. All states reported results by detailed payer type and gender within age groups. Table 5, Figure 9, and Figure 10 summarize age and gender results. For Definition #1 (Defined PCPs, Selected Services), the primary care percentage of total medical payments was highest for children, was lower with increasing age, and was higher for females than for males (5.6% vs 5.4%).

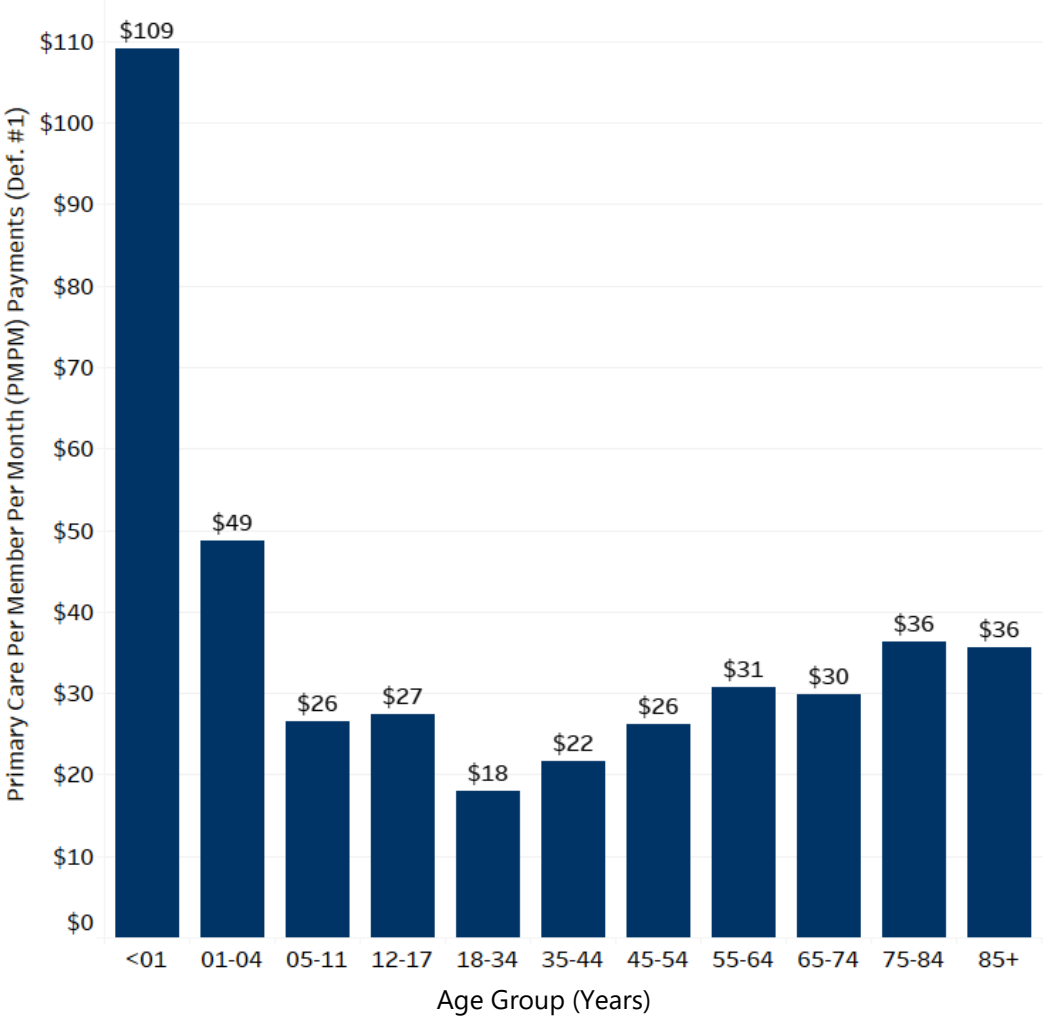
In contrast to the rates based on percentage of total medical payments, the actual PMPM expenditure rates for Definition #1 (Defined PCPs, Selected Services) and Definition #2 (Defined PCPs, All Services) had a U-shaped distribution – higher for children, lower for young adults, and higher for older adults. Since the overall medical expenditure rate was higher for older adults, it was not an unexpected finding that the percentage of primary care expenditure rate for that group was lower, while it is important to note that the actual primary care PMPM expenditure rate was higher for older adults.

Figure 9. All-Payer Primary Care Percentage Payments by Age Group (Years), 2018 – Definition #1 (Defined PCPs, Selected Services) *



* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Figure 10. All-Payer Primary Care PMPM Payments by Age Group (Years), 2018 – Definition #1 (Defined PCPs, Selected Services) *



* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Table 5. All-Payer Primary Care Expenditure Rates by Age & Gender Aggregated Across, 2018 *

Demographic	Member Months	% Definition #1 (Defined PCPs, Selected Services)	% Definition #2 (Defined PCPs, All Services)	% Definition #3 (Defined OB/GYNs, Selected OB/GYN Services)	% Definition #4 (Defined PCPs, Selected OB/GYN Services)	Definition #1 (Defined PCPs, Selected Services) PMPM	Definition #2 (Defined PCPs, All Services) PMPM
Age Group (Years)							
< 01	553,321	11.1%	13.8%	0.00%	0.98%	$109.07	$134.93
01–04	2,820,665	22.1%	25.8%	0.00%	0.00%	$48.67	$56.82
05–11	5,276,206	15.9%	19.1%	0.01%	0.00%	$26.46	$31.80
12–17	4,803,723	12.0%	15.2%	0.10%	0.02%	$27.43	$34.81
18–34	14,012,826	6.4%	9.2%	2.60%	0.18%	$17.94	$25.78
35–44	7,568,047	5.7%	8.4%	1.43%	0.07%	$21.60	$32.06
45–54	9,214,172	5.3%	8.2%	0.04%	0.01%	$26.26	$40.77

Demographic	Member Months	% Definition #1 (Defined PCPs, Selected Services)	% Definition #2 (Defined PCPs, All Services)	% Definition #3 (Defined OB/GYNs, Selected OB/GYN Services)	% Definition #4 (Defined PCPs, Selected OB/GYN Services)	Definition #1 (Defined PCPs, Selected Services) PMPM	Definition #2 (Defined PCPs, All Services) PMPM
55–64	10,493,602	4.4%	7.3%	0.00%	0.00%	$30.76	$51.01
65–74	9,770,678	4.4%	6.8%	0.02%	0.00%	$29.85	$46.09
75–84	4,830,823	3.7%	5.9%	0.01%	0.00%	$36.39	$58.18
85+	2,180,807	2.6%	5.1%	0.00%	0.00%	$35.64	$69.18
Gender							
Female	37,723,343	5.6%	8.3%	0.73%	0.06%	$29.96	$44.72
Male	33,801,527	5.4%	8.0%	0.00%	0.02%	$25.55	$37.87

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Rates by age group for all primary care measure definitions by payer type, aggregated across all of the states, are provided in Appendix 3.

Results for primary care Definition #1 (Defined PCPs, Selected Services) are provided in Table 6 by age and payer type, aggregated across all states. For Definition #1, the primary care percentage of total medical payments by age was higher for Commercial than for Medicaid children but similar for adults. Rates for Medicare Advantage were higher than for Medicare FFS.

Information regarding these differentials in percent of primary care payments and the PMPM by payer will be important in the consideration of future value-based payments to primary care practices. The characteristics of the practice members relative to age and gender should be considered in the development of any fixed payment arrangements with primary care practices and may be useful in evaluating the relationship between these payments and better outcomes.

Table 6. All-Payer Primary Care Expenditure Percentage of Total Medical Payments & Primary Care PMPM Rates by Payer Type, 2018 – Definition #1 (Defined PCPs, Selected Services) *

	Definition #1 (Defined PCPs, Selected Services) % Payments				Definition #1 (Defined PCPs, Selected Services) PMPM			
Age Group (Years)	Commercial	Medicaid	Medicare Advantage	Medicare FFS	Commercial	Medicaid	Medicare Advantage	Medicare FFS
< 01	11.6%	10.3%	--	--	$129.20	$82.79	--	--
01–04	24.4%	18.6%	--	--	$62.67	$33.77	--	--
05–11	18.9%	12.2%	--	--	$31.39	$20.32	--	--
12–17	13.0%	9.9%	--	--	$31.25	$20.78	--	--
18–34	6.6%	6.0%	5.0%	4.0%	$17.76	$18.02	$25.59	$24.59
35–44	5.8%	6.0%	4.6%	4.1%	$20.76	$22.56	$33.83	$31.05
45–54	5.5%	5.5%	4.7%	3.7%	$25.04	$28.13	$38.68	$35.42
55–64	4.5%	4.8%	4.5%	3.3%	$29.93	$31.12	$34.65	$35.38
65–74	4.2%	--	5.9%	3.8%	$33.70	--	$33.65	$26.61
75–84	3.8%	--	4.8%	3.2%	$32.84	--	$39.69	$35.10
85+	3.1%	--	3.8%	2.3%	$29.24	--	$38.22	$34.99

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Primary Care Payments by Primary Care Provider Type

Table 7 provides the results for primary care payments by primary care provider specialty across all states and payer types. For Definition #1 (Defined PCPs, Selected Services), internal medicine was the leading primary care provider specialty in payments followed by family medicine, pediatrics, nurse practitioner, physician assistant, and general practice.

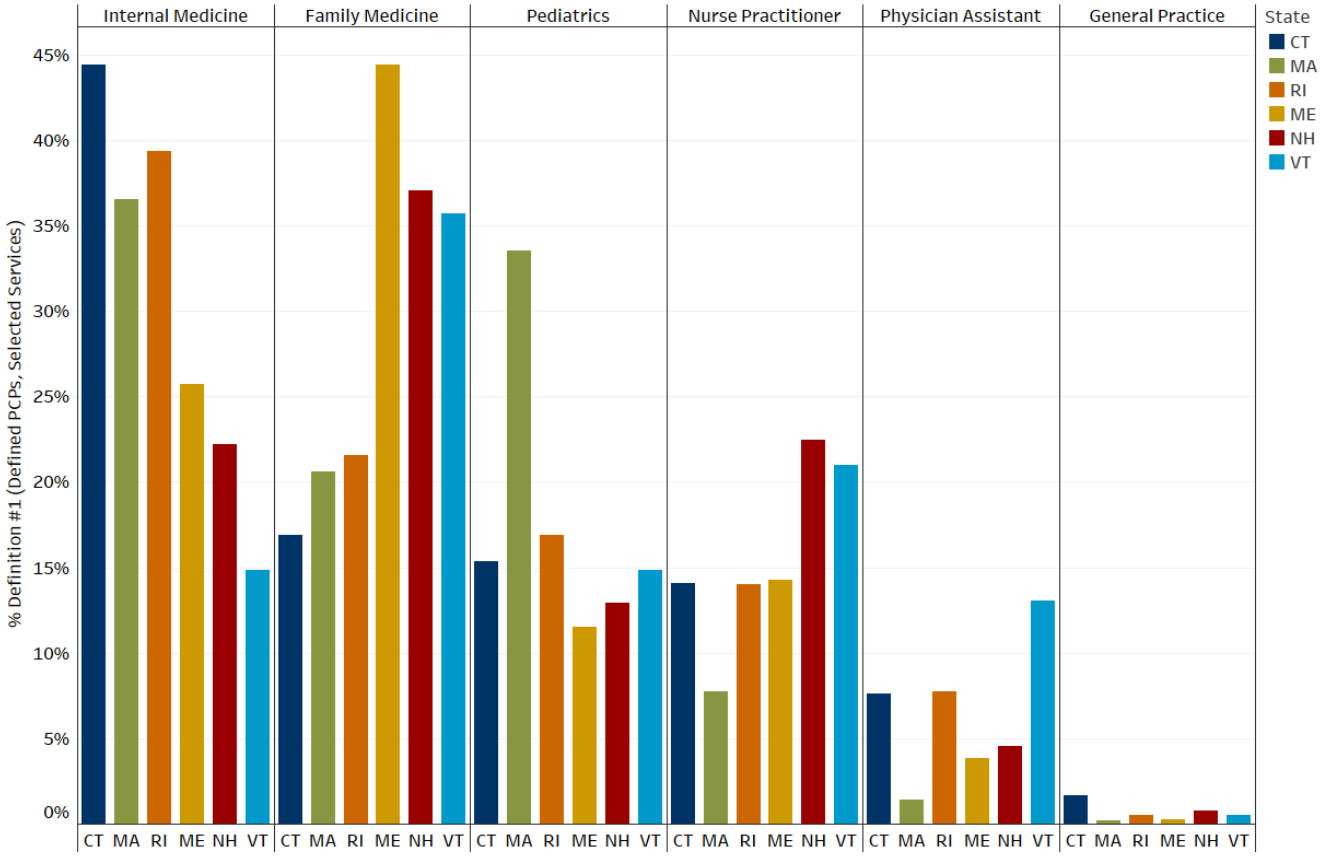
Table 7. All-Payer Primary Care Expenditure by Primary Care Provider Specialty, 2018 – Definition #1 (Defined PCPs, Selected Services) & Definition #2 (Defined PCPs, All Services) *

Primary Care Provider Specialty Group	Definition #1 (Defined PCPs, Selected Services) (in Millions of Dollars)	Definition #2 (Defined PCPs, All Services) (in Millions of Dollars)	Definition #1 (Defined PCPs, Selected Services) %	Definition #2 (Defined PCPs, All Services) %
Internal Medicine	$627.2	$1,027.0	34.0%	37.0%
Family Medicine	$479.5	$685.2	26.0%	24.7%
Pediatrics	$383.4	$467.6	20.8%	16.9%
Nurse Practitioner	$250.5	$385.4	13.6%	13.9%
Physician Assistant	$94.5	$152.4	5.1%	5.5%
General Practice	$12.4	$54.2	0.7%	2.0%
Total	$1,847.5	$2,771.9	100.0%	100.0%
Primary Care Facility, Practitioner Not Identified	$145.2	$193.9	N/A	N/A

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

The leading primary care provider specialty within each state is provided in Figure 11. For the more urbanized, southern New England states (CT, MA, RI), which have higher population density, the highest specialty in primary care payments was internal medicine. For the northern New England states (ME, NH, VT), which have lower population density, the highest specialty in primary care payments was family medicine. Pediatricians ranked higher in the southern New England states, while nurse practitioners ranked higher in the northern New England states.

Figure 11. All-Payer Highest Primary Care Expenditure Provider Specialty by State, 2018 – Definition #1 (Defined PCPs, Selected Services) * †



* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

† Note that the order of the states in this figure has been adjusted to group together the southern and more densely populated states (CT, MA, RI), which appear first within each provider specialty section, followed by a grouping of the northern and less densely populated states (ME, NH, VT).

Primary Care Payments by Service Type

Table 8 provides the leading primary care payments by service type across all state and by payer type categories. Office visit and preventive visit procedure codes accounted for 92.5% of the total for Definition #1 (Defined PCPs, Selected Services), and immunization administration added another 4.6% (see the top four rows in Table 8).

Table 8. All-Payer Primary Care Payments by Service Type, 2018 – Definition #1 (Defined PCPs, Selected Services) *

Service Type Category	Definition #1 (Defined PCPs, Selected Services) Payments (Millions of Dollars)	Definition #1 (Defined PCPs, Selected Services) Percent of Total Payments
Office Visits (CPT Codes)	$1,212.1	60.8%
Preventive Medicine Visits (CPT Codes)	$408.3	20.5%
Preventive and Other Visits (HCPCS Codes)	$222.9	11.2%
Immunization Administration for Vaccines/Toxoids	$91.9	4.6%
Consultation Services	$12.9	0.6%

Service Type Category	Definition #1 (Defined PCPs, Selected Services) Payments (Millions of Dollars)	Definition #1 (Defined PCPs, Selected Services) Percent of Total Payments
Transitional Care Management Services	$12.9	0.6%
Home Visits	$9.5	0.5%
Preventive Medicine Services	$6.0	0.3%
Health Risk Assessment, Screenings, and Counseling	$5.9	0.3%
Hospice / Home Health Services	$4.4	0.2%
Chronic Care Management Services	$3.8	0.2%
Advance Care Planning Evaluation & Management Services	$2.7	0.1%
Prolonged Services	$0.2	0.0%
Telephone and Internet Services	$0.1	0.0%
Health Risk Assessment Screenings and Counseling	$0.1	0.0%
Case Management Services	$0.0	0.0%
Domiciliary, Rest Home Multidisciplinary Care Planning	$0.0	0.0%

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Table 9 identifies the service types with the highest primary care payments within each payer type, aggregated across all six states. Office visits based on CPT coding were the leading primary care expenditure category across all payer types. As expected, Medicare and Medicaid claims were more likely to have preventive and other visits billed with HCPCS codes. Payments for consultation CPT codes were among the five highest expenditure service types for only Commercial members. Home visits ranked higher in Medicare Advantage, while transitional care management and hospice / home health services ranked higher in Medicare FFS. Detail of service types added for the broader Definition #2 (Defined PCPs, All Services), were not requested from the states.

Table 9. Highest Primary Care Expenditure Service Types by Payer Type (Payments in Millions of Dollars), 2018 – Definition #1 (Defined PCPs, Selected Services) *

Commercial	Medicare Advantage	Medicare Fee-for-Service	Medicaid
Office Visits (CPT Codes) $673.5	Office Visits (CPT Codes) $126.6	Office Visits (CPT Codes) $250.1	Office Visits (CPT Codes) $162.0
Preventive Medicine Visits (CPT Codes) $338.6	Preventive and Other Visit (HCPCS Codes) $36.8	Preventive and Other Visit (HCPCS codes) $97.5	Preventive and Other Visit (HCPCS Codes) $83.6
Immunization Administration for Vaccines/Toxoids $69.1	Preventive Medicine Visits (CPT Codes) $20.0	Transitional Care Management Services $6.4	Preventive Medicine Visits (CPT Codes) $49.7
Consultation Services $12.7	Home Visits $6.4	Hospice / Home Health Services $2.9 †	Immunization Administration for Vaccines/Toxoids $16.0
Preventive and Other Visit (HCPCS Codes) $4.9	Immunization Administration for Vaccines/Toxoids $4.0	Immunization Administration for Vaccines/Toxoids $2.8	Preventive Medicine Services $1.3

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

† Includes only selected services provided by defined PCPs; does not include all hospice and home health services.

Non-Claims Payments

Understanding the Transition to Value-Based Healthcare Models & Non-Claims Payments

The New England states, like other states across the country, have implemented an array of value-based models that include support for primary care transformation. Many of these value-based models are advancing the use of non-claims payments (NCPs) to support this transformation. A focus of many of these models includes capitated NCPs to enhance the capacity for primary care to take a central role in value-based population health initiatives. One of the goals of this report was to better understand the degree to which all payers are transitioning to non-claims payments, how these payments are defined and categorized, and what percentage of these payments are actually being used to support primary care provider practices.

Data Collection

Since non-claims payments usually are not reported to the states' all-payer claims databases (APCDs), information regarding these payments needed to be collected directly from payers. To accomplish this, Onpoint designed a data collection template to assist payers and states with the collection and reporting of non-claims payments. The template provides an agreed upon list of categories for non-claims payments and definitions for each category that was intended to make it easier for payers to report these types of payments in a more standardized manner. To collect this information, the participating New England states chose to use categories and definitions of non-claims payments that built upon previous efforts from other states. These categories and definitions are shown in Table 10, with the full template provided to the NESCSO states in Appendix 6.

Table 10. Non-Claims Payment Categories & Definitions Included in Collection Template

Non-Claims Payment Categories	Definition & Examples
Payments for Capitated Services	
1. Capitated or Salaried Expenditures	Capitation and/or salaried arrangements with primary care providers or other providers not billed or captured through claims. A fixed payment for each person the provider provides care for.
Other Types of Non-Claims Payments	
2. Risk-Based Reconciliation	Risk-based payments to primary care providers or practices that are not billed or otherwise captured through claims. Example: Year-end reconciled PMPM payments/penalties (upside or downside) made to the billing provider based on performance relative to contracted measure targets, e.g. wellness visit rate, flu shot compliance, or chronic care gap closure.
3. Patient-Centered Primary Care Homes (PCPCHs) / Medical Homes (PCMHs)	Practice-level payments such as payments to Patient-Centered Primary Care Homes (PCMH), Health Homes for provision of comprehensive primary care services; payments based upon PCMH recognition; or payments for participation in proprietary or other multi-payer medical -home or specialty care practice initiatives. Example: A per-member-per month payment based on a practice's PCMH tier level.
4. Provider Incentives	Example: Bonus payments to a provider for meeting predetermined baseline or target of medical service use, such as a specified vaccination rule.
4.a. Retrospective Performance-Based Payments	Retrospective incentive payments to primary care providers or practices based on performance aimed at decreasing cost or improving value for a defined population.
4.b. Prospective Performance-Based Payments	Prospective incentive payments to primary care providers or practices aimed at developing capacity for improving care for a defined population of patients.
5. Health Information Technology (HIT) Structural Changes	Payments for Health Information Technology structural changes at a primary care practice such as electronic records and data reporting capacity from those records

Non-Claims Payment Categories	Definition & Examples
6. Workforce Expenditures	Payments or expenses for supplemental staff or supplemental activities integrated into the primary care practice (i.e., practice coaches, patient educators, patient navigators, nurse care managers, etc.)
7. Other Expenditures	Please include and describe any other non-claims expenditures you currently incur to support primary care providers or practices (e.g., payments in loan forgiveness for training providers, flu clinics, rewards for provider reporting, or workforce expenditures for supplemental staff/activities integrated into the practice such as practice coaches/patient educators/patient navigators/nurse care managers):
8. Other Expenditures Not Paid Directly to Primary Care Practices	Please include and describe any other non-claims expenditures you incur as an insurer to support members in accessing primary care that are not paid to primary care practices (e.g. technical assistance to practices, home visits, mobile fairs, member incentives, direct-to-consumer primary care telehealth services):
Total	Even if your organization is not able to report break-outs by the non-claims expenditure categories above, please provide total non-claims paid dollars for each major plan type covered by your organization (columns D - X) and include an estimate of the percentage for each of the non-claims expenditure categories (Column A).

Collecting detailed and standardized information regarding NCPs proved to be extremely challenging. Only four of the six New England states – Connecticut, Massachusetts, Rhode Island, and Vermont – were able to collect and report non-claims payment information from Commercial payers. Two states provided information from Medicaid, and only one provided information from Medicare. It is not clear how much payment information the payers provided in regard to self-insured plans, so it is likely that these payments may be understated and may vary from state to state depending on the willingness of the payers to provide this information.

Identifying Primary Care Payments from Non-Claims Sources

Although some payers were able to report their payments using the defined categories, the reliability of the data was questionable. For example, other than payments to Primary Care Medical Homes (PCMHs), it was not always clear what percent of other payments were directly used to support primary care practices. State data analysts were able to provide estimates regarding the percentage of payments that were used to support primary care, but better reporting practices will be required in the future to better understand how these payments are being directed and what impact they may be having on the quality and cost of healthcare services being provided. NCPs that were not clearly directed to primary care and instead may have been paid to hospitals or other healthcare systems have been classified as "unknown" to distinguish them from those that were known to directly benefit primary care. According to the state data analysts' estimates, of the total Commercial non-claims payments, the amount that directly benefitted primary care practices ranged from 57% in Vermont to 85% in Rhode Island (see Table 11).

Table 11. Commercial Non-Claims Payments, 2018 *

Expenditure Category	CT		MA		RI		VT	
	Payments	%	Payments	%	Payments	%	Payments	%
Primary Care	$13,247,026	81%	$323,123,617	77%	$35,485,443	85%	$7,627,769	57%
Unknown	$3,200,989	19%	$93,951,807	23%	$6,320,554	15%	$5,847,126	43%
Total	$16,448,016	100%	$417,075,423	100%	$41,805,997	100%	$13,474,895	100%

* Massachusetts data: Commercial (2017)

In light of the challenges with tracking NCPs at this time, the percentages in Table 12 were based upon both the payment information available from payers in each state and the best estimates from state analysts regarding the percent of those payments that were directed to primary care practices.

The experience from this study has highlighted the need to work with states and payers to track NCPs using a standardized approach that allows for comparability across payers and across states and to accurately measure the level of investment that is going to primary care through capitation and other value-based payment approaches. Ideally, analysts should be able to identify the total amount of investment in primary care practices from both claims payments and non-claims payments directly from the state APCDs and standardized reports from payers.

Based on available information, the addition of Commercial non-claims payments to the Commercial claims payments contributed an additional 0.2% to 4.5% to the total percent of primary care payments.

Table 12. Commercial Payments & Percent Primary Care from Claims & Non-Claims Sources, 2018 * †

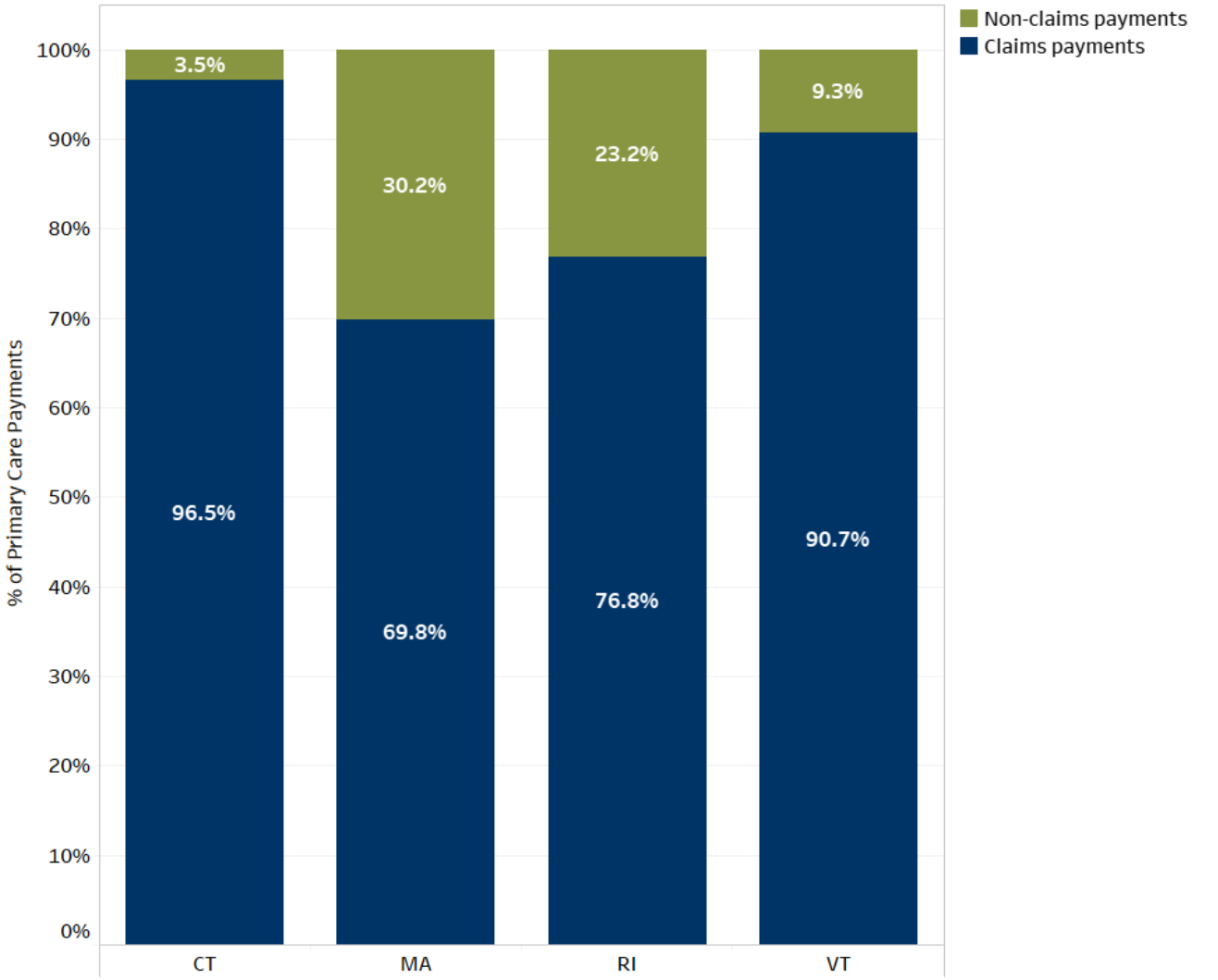
Payment Type	CT	MA	RI	VT
Primary Care Claims Payments	$367,922,210	$637,209,440	$117,396,901	$74,258,181
Primary Care Non-Claims Payments	$13,247,026	$323,123,617	$35,485,443	$7,627,769
Unknown Non-Claims Payments	$3,200,989	$93,951,807	$6,320,554	$5,847,126
Total Non-Claims Payments	$16,448,016	$417,075,423	$41,805,997	$13,474,895
Total Medical Claim Payments	$4,613,691,147	$5,834,369,344	$1,298,430,746	$1,068,116,872
% Primary Care Payments from Claims	8.0%	10.9%	9.0%	7.0%
% Primary Care Payments from Both Claims and Non-Claims	8.2%	15.4%	11.4%	7.6%
% Difference	0.2%	4.5%	2.4%	0.6%

* Massachusetts data: Commercial (2017)

† Claims payments excluded FFS equivalency to avoid duplication between claims and non-claims data sources. The percent of primary care payments from claims will not match Definition #2 (Defined PCPs, All Services) reported in the claims section of this report.

Onpoint examined the impact of adding Commercial primary care non-claims payments reported by the payers that were identified as being directed to primary care practices to those primary care claims payments reported through the state APCDs. The payment data from Connecticut, Massachusetts, Rhode Island, and Vermont were used to compare the percent of Commercial claims and Commercial non-claims payments that were directed to primary care practices in each state (Figure 12).

Figure 12. Distribution of Commercial Primary Care Payments Between Claims & Non-Claims Payments by State, 2018 *



* Massachusetts data: Commercial (2017)

It is anticipated that non-claims payments will be increasing over time for all healthcare services and specifically for primary care practices. The premise is that value-based NCPs in conjunction with a shift away from volume-based fee-for-service payments will allow primary care providers to restructure daily operations in a way that supports improved quality, utilization, and population health. In order to evaluate whether these goals have been achieved, it will be necessary for states to have more complete, comparable, and accurate information from payers. This may require more state regulations, statutes, or rules to standardize the way in which non-claims payments are reported, to whom the payments were directed, and what measures will be required to evaluate progress toward achievement of the goals noted above.

DISCUSSION OF METHODOLOGY & FINDINGS

This is the first multi-state report of all-payer primary care payments across the six New England states using standard definitions and a standardized methodology. The methods were derived from the conceptual work of Bailit (supported by the Milbank Memorial Fund), consideration of other prior studies, input from each of the six New England states, NESCSO, Onpoint, and physician and other consultants. Provider taxonomy codes and procedure codes, including those used by Medicaid and Medicare, were extensively reviewed and updated. A distributed model was used, allowing states to produce summary data according to specifications in a timely manner without requiring unit-record data to leave the state. Among the results:

- The six New England states successfully implemented the standardized measures using APCD data across all payer types, resulting in a study based on more than 7 million Commercial, Medicare Advantage, Medicare Fee-for-Service, and Medicaid members using data from the most current data year available (2018 for five of the six states).
- Inclusion of OB/GYN providers and services resulted in a very small increase in the overall primary care expenditure measures. A broader range of providers that are sometimes considered as primary care (e.g., naturopaths, behavioral health providers) were not included in this study.
- The all-payer combined primary care percentage of total medical payments was 5.5% using the narrower Definition #1 (Defined PCPs, Selected Services) and 8.2% using the broader Definition #2 (Defined PCPs, All Services) – results that fell within the range of other published studies that have examined primary care payment as the percentage of total payments invested in primary care.
- Results varied by payer type and by state within each payer type as other studies have demonstrated. As a percentage of total payments, primary care payments were lower for the older Medicare population than for the younger Commercial and Medicaid populations, but actual per member per month (PMPM) payments for primary care were higher for the Medicare Advantage and Medicare Fee-for-Service (FFS) populations. The causes of these variations were not determined as part of this baseline descriptive study.
- The highest primary care payments based on provider specialty in the more densely populated southern New England states was internal medicine, while the highest primary care payments based on provider specialty across the less densely populated northern New England states was family medicine. This highlights the need for further analysis to better understand how more urbanized areas with a larger number of health systems, higher bed supply, and access to specialists might be delivering care and investing in primary care compared to more rural areas.

Distributed Model

The Milbank-Bailit study used a distributed model to provide a specification to retrieve summary data results from Commercial payers. In the same way, a distributed model was selected for this NESCSO project. In collaboration with physician and other consultants, NESCSO and Onpoint reviewed specifications for methods and summary report formats with the participating states. Each state then prepared the data from their APCD or, in a few cases, from payer data housed outside of the APCD. A form to collect non-claims primary care payments and payment from each state also was developed and supplied to the states.

Advantages of the distributed model approach include:

- Person-level APCD enrollment and claims data did not need to leave the state and could be provided in a timelier manner
- Each state used its own expert knowledge of its APCD data structure to produce reporting, investigate variances from other reports, and determine solutions to data issues that might be unique to the state data
- Each state retained the code that it built to generate the reports
- The code and methods may have applications to future iterations or to other projects
- Results are fully available to the participating states

Challenges of the distributed model approach include:

- Increased opportunity for variation in the interpretation of the definitions and how the specifications were applied, which could influence alignment and comparability
- The need for detailed review by all state participants to understand variations and gaps in available data and to come to collective agreement on steps forward as issues arose during the study
- Each state's immediate priorities during the study and the availability of people with the skills that were needed to complete the work in coordination with other states
- An overall increase in the number of people that dedicated time to complete the project, potentially increasing overall costs as redundant resources and skills were applied within each state
- Potential for the level of commitment to vary across states, particularly when cross-agency participation was needed that was beyond the control of the lead agency participating in each state

Issues Identified During the Study & Recommendations for Consideration

Several issues were raised and discussed during this project. Key among them is the fact that there is no national standard for primary care payments as a percentage of total healthcare expenditures. Previous studies and stakeholder groups have focused on the numerator (i.e., primary care payments) but have given relatively less attention to the denominator (i.e., total healthcare expenditures). While this study made significant efforts to clearly define the specifications for both the numerator and the denominator, the results of this study cannot be directly compared to other prior studies that varied in their definitions or provided insufficient details regarding methods. A discussion of other considerations follows.

Inclusion of Out-of-State Providers

States used their APCD to report payments for members residing in their state. The study did not make any provider-location exclusions. State residents sometimes use out-of-state primary care providers for care, and the degree of this use may vary by state and by payer type (e.g., Commercial, Medicare Advantage, Medicare FFS, Medicaid). These considerations, including the fact that state legislation or non-claims payment might apply to only in-state providers, were discussed by the NESCSO states and resulted in the inclusion of out-of-state providers. It is unlikely that this would impact the measure of interest – the percentage of total healthcare expenditures – to a great degree. For future studies, we offer the following recommendation:

- States may wish to discuss whether future reporting should measure in-state vs. out-of-state providers in the numerator and denominator separately.

Care Delivered in a Primary Care Setting

Claims data contains no field or coded value that captures or indicates that care is delivered in a primary care setting. Instead some prior studies and this study have worked extensively to determine lists of provider taxonomy codes and service codes to use in the absence of such information. For example, Federally Qualified Health Centers (FQHCs) sometimes bill on facility claim types, and the rendering physician on the claim identifies only that it was an FQHC but omits the actual specialty/taxonomy of the provider. This practice varies by state and payer type. There also is uncertainty whether nurse providers and some other provider types are practicing in a primary care setting for the service reported on the claim. While this study may represent the most comprehensive effort to report primary-care expenditure across multiple state APCDs to date, there is some degree of uncertainty whether the results may slightly over-represent or under-represent primary care as a percentage of total healthcare expenditures, and this may vary by state and by major payer type. States might consider the following recommendations for future improvements in data collection and reporting:

- A more detailed study of the impacts of inclusions or exclusions of specific taxonomy codes and specific procedure (CPT/HCPCS) codes on the data
- Requiring payers to be more rigorous in their submission of National Provider Identifier (NPI), taxonomy, and other provider data to the APCD
- Requiring payers to submit more detailed information regarding which providers and/or which services were provided in a primary care setting
- States could build and update a statewide data source of primary care providers, including NPI, taxonomy, practice location, and proportion of time spent providing primary care. While some NESCSO states have started, no state has a complete data source. NESCSO states could join to accomplish this.
- Evaluate other efforts such as state provider directory solutions along the lines of IHA's use of the Symphony Provider Directory (https://symphony.iha.org) in California

Defining Primary Care Providers & Services

In December 2019, the NESCSO Primary Care Investment Workgroup members recommended a narrow working definition of primary care providers and services. Additional review of prior work and new studies took place, and enhancements were made to the final list of provider taxonomy codes. This study included some sub-specialties of primary care (e.g., geriatric medicine) but not all sub-specialties of primary care (e.g., sports medicine). While some non-physician specialties (e.g., naturopaths) were included in other studies, they were not included in this study. Obstetrics/gynecology and selected services were included but were reported separately.

NESCSO and other states are considering incorporating behavioral health as part of primary care and have generated reporting for behavioral health payments. This first NESCSO project that focused on primary care payments did not include any behavioral health specialty taxonomy codes or behavioral health management or psychotherapy services. Other services like preventive dental care might also be considered as primary care, and this study reported dental care services separately in the denominator.

State considerations for future work, include the following:

- A more detailed study of the impacts of inclusions or exclusions of specific taxonomy codes and specific service procedure (CPT/HCPCS) codes on the data
- Evaluating the impact of including but reporting separately other provider and service types (e.g., behavioral health)

Defining the Populations Studied

All six NESCSO state APCDs collect consistent membership and claims data. Initially, the NESCSO group intended to use medical membership eligibility data to link medical and pharmacy claims based on each person's member ID from their primary payer. Following discussion with NESCSO states, this presented some complexities, and it was noted that since the measure required only claims data, membership eligibility data was not needed for this project. In addition, states vary in whether data submissions are person-identifiable or de-identified, which imposes some limits on linking.

The final, agreed-upon specifications called for the reporting of primary payer only and included separate reporting of medical member months, pharmacy member months, medical claims, and pharmacy claims without linking on member ID. This contrasts with the approach taken in the Milbank-Bailit study in which membership and payments were tracked at the individual level. For this NESCSO study, member months were used with the claims' total payments to generate PMPM rates and to provide a quality control for the results received. Other studies have varied in their methods or have not described the methods used. We suggest that states consider the following recommendations:

- More closely evaluate each state's strengths and limitations in linking a member's total experience across data files and by payer type
- Encourage each state to collect identifiable APCD data to enable reliable linkage
- Engage in a more detailed evaluation of the limitations and reliability of product type coding and claim status coding by payer type and submitter/payer
- Consider capturing payments that are tracked at the member level

Retail Pharmacy Payments

The inclusion of retail pharmacy in the denominator was done in a few studies, including the Milbank-Bailit study, while several other studies did not include retail pharmacy in the denominator. While retail pharmacy can represent 20 percent or more of total healthcare expenditures, there was a lack of consensus among the NESCSO states regarding inclusion of retail pharmacy in the denominator.

Due to some pharmacy carve-outs (e.g., Express Scripts, Caremark, SilverScript) in each state's data, linkage on a member ID would increase the reliability of the pharmacy data when reported by payer type. Without relying on linkage by member ID, this issue could largely be resolved by using the payer-submitted product types to separate Commercial, Medicaid, and Medicare data. The exception is for Medicare where the product type "MD" in the Commercial data source cannot distinguish between Medicare Advantage and Medicare FFS payer types.

The allowed amounts on claims data often do not represent final reimbursements due to rebates. Some states have initiated efforts to collect information on pharmacy rebates, which often are not captured at the service-line level. Recommendations include:

- States may wish to continue to explore solutions to enable the ability to link pharmacy membership and claims to medical membership and claims. This issue impacts a wide range of healthcare measures and studies.
- States may wish to consider evaluating and capturing the impact of pharmacy rebates.

Plan Paid or Allowed Amount

The Milbank-Bailit study and a few other studies used the allowed amount (i.e., the sum of plan paid, copay, deductible, and coinsurance). Several other studies used plan paid only without the member responsibility.

Overall, this may or may not have a large impact on measures of interest depending on the relative impact that member responsibility has on the numerator and denominator. If a member was covered in a high-deductible plan, some or even all of that member's primary care payments might be missing if plan paid was used instead of allowed amount. From a primary care provider's perspective, the allowed amount influences what they are paid. From the payer's perspective, the plan paid amount is what plans pay providers. We offer the following recommendation:

- When states consider drafting legislation, standards, or guidelines regarding the reporting of primary care payments, they should ensure more clarity about what defines "payments" (e.g., "charges," "cost," "allowed amounts," "paid amounts," or other terms used to represent payments).

Dental & Vision Services

The coverage of dental and vision services varies by payer type, individual payer, product type, and state. Medicaid typically covers all dental and vision services, while other payer types vary in their degree of coverage. Within the NESCSO states, some states also captured data in a separate submission file from dental (e.g., Delta Dental) or vision (e.g., VSP, EyeMed) benefit insurers. Due to the inconsistency in benefit coverages for members in the APCD and availability of data, NESCSO states reported costs for dental and vision care separately in the summary reporting. Generally, in this report, these dental and vision care payments were not included in the denominator. Recommendations include:

- States may wish to consider developing a process to collect dental and vision data.
- States may wish to further discuss whether some dental services should be considered part of primary care even if not delivered by primary care providers.

Further Understanding Medicaid Payments

The Milbank-Bailit study and several other studies focused on the Commercial population, some studies include Medicare and Managed Medicaid, and relatively few studies include the Medicaid FFS population. The services paid by Medicaid will vary from state to state and often include non-medical services such as home- and community-based services, day treatment, residential care, some school-based services (e.g., those paid by the Department of Education), transportation, personal care services, services for children in foster case, and case management.

For children, these services represent most of the payments paid by Medicaid and therefore can have a dramatic impact on the denominator, reducing the percentage of payments invested in primary care. Given the complexity of consistently identifying payments for these services across states, the approach taken in this study was to identify and exclude claims payments for these types of social support services.

NESCSO states varied in the data that they had available to identify and make these exclusions. For example, one state had included fund source and categories of service in their Medicaid data submission to the APCD, while another state omitted the information although estimates were available using an alternate source. Payments for some, but not all, of these services are reported to CMS in CMS-64 reporting. The states were asked to submit additional information about the social support service payments that they excluded, but this was inconsistent between states.

There were additional challenges related to the Medicaid data provided for this report. The percentage of members enrolled in Medicaid managed care programs in the six states varied, and some states noted that their Medicaid FFS programs functioned like Medicaid managed care. The demographic distribution of the Medicaid population reported by each state for Medicaid was variable, with some states reporting a much higher percentage of children covered by Medicaid compared to other states.

This NESCSO study excluded long-term care services and restricted the Medicaid population to members under the age of 65 years to minimize any long-term care paid by Medicaid. Recommendations include:

- Convene a NESCSO working group specific to addressing issues related to Medicaid claims data.
- State APCDs should increase their efforts to capture Medicaid membership and claims data.
- Improve the capture of data elements specific to Medicaid even when they are not available in standard APCD submissions for other payer types.
- Continue to discuss and refine which services constitute social support services.

Key Recommendations

Based on the findings from this study, NESCSO recommends that states address specific policy and technical issues to improve data collection processes in order to ensure that the data is useful in evaluating the potential impact of increasing primary care payments as a means to improve quality and reduce costs. These recommendations include the following:

- Policy issues recommended for states
  - **Standardize an approach to collecting data related to non-claims payments.**
    - Given the increasing use of non-claims payments, states should expand efforts through legislation, regulations, or other mechanisms to require reporting of non-claims data by states and payers at the member level or most granular level possible.
    - Collaborate with other organizations already initiating methods to develop improved tracking of non-claims healthcare payments.
  - **Standardize a more consistent approach to reporting on Medicaid services and payments**.
    - Define more consistently the total amount of Medicaid payments, on behalf of Medicaid beneficiaries, that are designated to support primary care practices, whether through Medicaid managed care or Medicaid FFS.
  - **Standardize an approach that incorporates both the percentage of total cost of care and per member per month (PMPM) payments going to primary care** to better understand how each of these alone or in combination is associated with desirable population-level outcomes.
- Technical issues recommended for health policy researchers
  - **Develop a standardized approach to evaluating the association between primary care payments and performance outcomes.**
    - Examine the relationships between primary care payments and outcomes (e.g., total payments, inpatient use, avoidable use and overuse, underuse and gaps in care, access to care, and health status) to inform decision-making policy related to payment in primary care. Inventory what data states are already producing or can easily generate for outcome measures. Consider performing analyses subset to specific populations (e.g., members with diabetes or other chronic diseases) as well as analyses by geographical regions within each state.
  - **Develop a plan to track and collect payment information in regard to "remote care management."**
    - Include telehealth and remote monitoring.

- **Standardize an approach to incorporating pharmacy payments in total healthcare expenditures.**
  - Link retail pharmacy using member identification, including carve-outs, and explore feasibility of capturing non-claims pharmacy rebate data.
- **Measure the impacts of COVID-19 on primary care payments, total healthcare expenditures, and other outcome measures.**
  - Given the interruption of services and the transition to virtual visits, the comparability of 2020 data to previous and future years should be considered.
  - Many new codes are being implemented to report COVID-related services. These should be considered in future analyses to accommodate the growing number of telehealth / virtual visits.
- **Plan to evaluate the broader Definition #2 (Defined PCPs, All Services) of primary care used in the current study.**
  - Identify more specifically those additional services and procedure codes that were included in Definition #2 of this study.
  - Identify which of those services had the greatest impact leading to the increase in the percent of primary care payments.

CONCLUSIONS

NESCSO, Onpoint Health Data, and the six New England states successfully completed a first analysis of primary care payments across all payer types and all participating states. This study benefitted from the existence of APCDs in all six states and from prior analysis and reporting on primary care payments by several other states. A distributed model was successfully utilized in all six states to report summary results. The states participating in the NESCSO workgroup and on this project provided valuable input into the report specifications and feedback regarding the results.

This study's results suggest that investment in primary care was relatively low – 5.5% using the narrower Definition #1 (Defined PCPs, Selected Services) and 8.2% using Definition #2 (Defined PCPs, All Services) – compared to total healthcare expenditures and varied significantly by payer, geography, age group, and other factors. The similarity in findings to other studies was evident despite differences in the definitions, specifications, and methods that were used. Similar to other studies, this baseline, descriptive study by NESCSO identified significant variances between the six New England states. The causes of these variances may be worth further study.

The study also highlighted opportunities to improve study methods and to establish more consistently comparable results across payers and settings. In addition, during the course of the study, an opportunity was identified to use the NESCSO model in another state. Onpoint Health Data has been working for California's Integrated Healthcare Association (IHA) on a project funded in part by Covered California to measure primary care expenditures. The IHA stakeholder group, which included physicians and other experts, adopted methods proposed in the NESCSO project. At the same time, California proposed a few enhancements to the type of included services, which were adopted by NESCSO.

Collectively, the experience from this study builds on previous studies, provides a basis for NESCSO states to work together to advance study methods and gain further insights, and initiates baseline measurement that can be used to guide states' decision-making and monitor progress related to primary care payments.

APPENDICES

Appendix 1: Key Summary Measures Aggregated Across All States & Payer Types (Payments Reported in Millions of Dollars), 2018

Appendix 2: Report #1 – Primary Care Payments by Payer Type & State, 2018

Appendix 3: Report #4 – Primary Care Payments by Payer Type & Age Group

Appendix 4: Development Process for Measure & Report Specifications

Appendix 5: NESCSO Primary Care Expenditure Reporting Specification to NESCSO Participating States (Version 1.1)

Appendix 6: Non-Claims Based Payments – Reporting Template July 2020 for Commercial, Medicaid Managed Care, and Medicare Advantage Data

Appendix 7: Comparison of NESCSO Primary Care Payments to Other Published Studies

Appendix 1. Key Summary Measures Aggregated Across All States & Payer Types, 2018

Provides an aggregated summary of the data that was provided across all states and all payer types. These form the claims-based foundation for this study. More than 7 million members incurred more than $36 billion in allowed payments on medical claims. Pharmacy claims represented more than $8 billion in allowed amount payments and had limited use for this study, which did not include direct linkage on medical member ID to pharmacy member ID, as well as the potential impact of pharmacy rebates for which no data was available.

Across all six New England states and all payer types, the all-payer combined primary care percentage of total medical payments was 5.5% using the narrower Definition #1 (Defined PCPs, Selected Services) and 8.2% using the broader Definition #2 (Defined PCPs, All Services) – results that fell within the range of other published studies (see the top four rows in the following table's "Measure Results" section).

Key Summary Measures Aggregated Across All States & Payer Types (Payments Reported in Millions of Dollars), 2018 *

Measure	Aggregated All-State, All-Payer Results
Unique Members (Medical Eligibility)	7,165,552
Member Months (Medical Eligibility)	71,525,041
Member Months (Retail Pharmacy Eligibility) †	67,033,905
Total Medical Claims Payments (Excludes Medical FFS Equivalency, Dental, Vision, Medicaid Social Support Services)	$35,678.0
Total Medical Claims FFS Equivalency Payments	$644.9
Total Retail Pharmacy Claims Payments †	$8,571.9
Definition #1 (Defined PCPs, Selected Services) Claims Payments	$1,945.6
Definition #1 (Defined PCPs, Selected Services) FFS Equivalency Payments	$48.2
Definition #2 (Defined PCPs, All Services) Claims Payments	$2,899.8
Definition #2 (Defined PCPs, All Services) FFS Equivalency Claims Payments	$67.1
Definition #3 (Defined OB/GYNs, Selected OB/GYN Services) Claims Payments	$143.0
Definition #3 (Defined OB/GYNs, Selected OB/GYN Services) FFS Equivalency Payments	$5.8
Definition #4 (Defined PCPs, Selected OB/GYN Services) Claims Payments	$15.0
Definition #4 (Defined PCPs, Selected OB/GYN Services) FFS Equivalency Payments	$0.5
Measure Rates	
Definition #1 (Defined PCPs, Selected Services) % of Total Medical Payments	5.5%
Definition #2 (Defined PCPs, All Services) % of Total Medical Payments	8.2%
Definition #3 (Defined OB/GYNs, Selected OB/GYN Services) % of Total Medical Payments	0.41%
Definition #4 (Defined PCPs, Selected OB/GYN Services) % of Total Medical Payments	0.04%
Definition #1 (Defined PCPs, Selected Services) PMPM	$27.88
Definition #2 (Defined PCPs, All Services) PMPM	$41.48

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

† Retail pharmacy was excluded from the study denominator, was reported separately from medical membership and medical claims by the states, and has not been adjusted for pharmacy rebates.

Appendix 2. Report #1 – Primary Care Payments by Payer Type & State, 2018 *

State	Primary Payer Type	% Definition #1 (Defined PCPs, Selected Services)	% Definition #2 (Defined PCPs, All Services)	% Definition #3 (Defined OB/GYNs, Selected OB/GYN Services)	% Definition #4 (Defined PCPs, Selected OB/GYN Services)
VT	Commercial	4.9%	7.4%	0.4%	0.1%
ME	Commercial	5.1%	10.8%	0.5%	0.1%
CT	Commercial	5.3%	8.0%	0.7%	0.0%
RI	Commercial	6.0%	9.0%	0.4%	0.0%
NH	Commercial	7.4%	9.4%	0.7%	0.1%
MA	Commercial	8.0%	11.0%	0.8%	0.1%
CT	Medicare Advantage	4.7%	7.1%	0.0%	0.0%
RI	Medicare Advantage	4.9%	8.2%	0.0%	0.0%
NH	Medicare Advantage	5.7%	7.7%	0.0%	0.0%
ME	Medicare Advantage	6.1%	10.7%	0.0%	0.0%
VT	Medicare Advantage	6.1%	8.2%	0.0%	0.0%
CT	Medicare FFS	2.8%	4.5%	0.0%	0.0%
RI	Medicare FFS	2.9%	5.5%	0.0%	0.0%
NH	Medicare FFS	3.2%	5.1%	0.0%	0.0%
VT	Medicare FFS	3.9%	5.6%	0.0%	0.0%
ME	Medicare FFS	4.2%	6.4%	0.0%	0.0%
RI	Medicaid	5.4%	8.3%	0.5%	0.0%
MA	Medicaid	7.4%	10.4%	1.1%	0.2%
ME	Medicaid	7.8%	10.8%	0.3%	0.1%
NH	Medicaid	9.4%	10.1%	1.0%	0.1%
VT	Medicaid	10.1%	12.4%	0.6%	0.1%

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Appendix 3. Report #4 – Primary Care Payments by Payer Type & Age Group, 2018 *

Payer Type	Age Group (Years)	% Definition #1 (Defined PCPs, Selected Services)	% Definition #2 (Defined PCPs, All Services)	% Definition #3 (Defined OB/GYNs, Selected OB/GYN Services)	% Definition #4 (Defined PCPs, Selected OB/GYN Services)	Definition #1 (Defined PCPs, Selected Services) PMPM	Definition #2 (Defined PCPs, All Services) PMPM
Commercial	< 01	11.6%	14.4%	0.00%	1.10%	$129.20	$160.11
Commercial	01–04	24.4%	28.0%	0.00%	0.00%	$62.67	$71.98
Commercial	05–11	18.9%	22.7%	0.01%	0.00%	$31.39	$37.65
Commercial	12–17	13.0%	16.7%	0.07%	0.01%	$31.25	$40.12
Commercial	18–34	6.6%	9.5%	2.70%	0.15%	$17.76	$25.51
Commercial	35–44	5.8%	8.6%	1.73%	0.08%	$20.76	$30.82
Commercial	45–54	5.5%	8.6%	0.06%	0.01%	$25.04	$39.20
Commercial	55–64	4.5%	7.6%	0.00%	0.00%	$29.93	$50.37
Commercial	65–74	4.2%	7.1%	0.00%	0.00%	$33.70	$57.33
Commercial	75–84	3.8%	7.1%	0.00%	0.00%	$32.84	$61.33
Commercial	85+	3.1%	6.5%	0.00%	0.00%	$29.24	$60.84
Medicaid	< 01	10.3%	12.7%	0.00%	0.77%	$82.79	$102.03
Medicaid	01–04	18.6%	22.4%	0.00%	0.00%	$33.77	$40.68
Medicaid	05–11	12.2%	14.7%	0.00%	0.00%	$20.32	$24.53
Medicaid	12–17	9.9%	12.2%	0.16%	0.04%	$20.78	$25.59
Medicaid	18–34	6.0%	8.7%	2.63%	0.28%	$18.02	$26.01
Medicaid	35–44	6.0%	9.0%	0.96%	0.10%	$22.56	$33.51
Medicaid	45–54	5.5%	8.2%	0.02%	0.01%	$28.13	$41.85
Medicaid	55–64	4.8%	7.5%	0.00%	0.00%	$31.12	$48.54
Medicare Advantage	18–34	5.0%	6.6%	0.23%	0.01%	$25.59	$33.89
Medicare Advantage	35–44	4.6%	7.2%	0.10%	0.01%	$33.83	$53.01
Medicare Advantage	45–54	4.7%	7.6%	0.01%	0.00%	$38.68	$62.13
Medicare Advantage	55–64	4.5%	7.3%	0.01%	0.00%	$34.65	$56.76
Medicare Advantage	65–74	5.9%	8.9%	0.02%	0.00%	$33.65	$51.04
Medicare Advantage	75–84	4.8%	7.6%	0.01%	0.00%	$39.69	$62.36
Medicare Advantage	85+	3.8%	7.1%	0.00%	0.00%	$38.22	$71.23
Medicare FFS	18–34	4.0%	5.5%	0.32%	0.01%	$24.59	$33.91
Medicare FFS	35–44	4.1%	6.1%	0.08%	0.01%	$31.05	$45.53
Medicare FFS	45–54	3.7%	5.6%	0.01%	0.00%	$35.42	$54.34
Medicare FFS	55–64	3.3%	5.3%	0.01%	0.00%	$35.38	$56.43
Medicare FFS	65–74	3.8%	5.7%	0.02%	0.00%	$26.61	$40.05
Medicare FFS	75–84	3.2%	5.1%	0.01%	0.00%	$35.10	$55.71
Medicare FFS	85+	2.3%	4.5%	0.00%	0.00%	$34.99	$68.86

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Appendix 4. Development Process for Measure & Report Specifications

Defining Primary Care Providers & Services

A NESCSO Primary Care Investment Workgroup ("Workgroup") was formed in 2017 and began discussion on definitions of primary care, primary care provider types, and primary care service types. This included review of Healthcare Common Procedure Coding System (HCPCS) and Current Procedural Terminology (CPT) procedure/service codes used in reporting for multiple states, including Connecticut, Massachusetts, Oregon, Rhode Island, and Vermont. The Workgroup created a document – "Proposed Definitions for Multi-State Report on Primary Care Investments" (December 9, 2019) – that included a list of HCPCS codes and descriptions of the types of providers and services that would be included. The goal was twofold: (1) Identify a list of taxonomy codes to identify primary care providers, and (2) identify a list of procedure/services codes to create a single, narrow definition of primary care services for reporting. From the December 2019 document, some provider types (e.g., obstetrics/gynecology) were not included, and specific taxonomy codes to operationalize the types of providers to include from the claims data were not defined yet.

From this starting point, Onpoint reviewed and incorporated additional information from more recently published studies (e.g., Maine, Vermont, Washington), cross-walked procedure codes, and compared provider taxonomy codes from studies that published code lists. These were reviewed with clinical consultants and with the NESCSO states. In parallel, Onpoint was working with a primary care stakeholder group in California that was conducting a similar study to review procedure and taxonomy codes in the interest of aligning with the NESCSO definitions. A more detailed review of the subcategories of the taxonomy codes for family medicine, internal medicine, pediatric medicine, nurse practitioners, and physician assistants took place. Additional review was conducted and logic was developed for the taxonomy codes for Federally Qualified Health Centers, Rural Health Centers, and primary care clinics that may have been billing for primary care services for which specific provider types (e.g., family medicine) could not be determined.

Additional feedback from the NESCSO states was incorporated into a final definition of the HCPCS codes and taxonomy codes to be used for this study. Service types and codes missing from the NESCSO 2019 proposed definitions were added, and taxonomy codes were finalized. Obstetrics/gynecology providers and selected obstetrics/gynecology services were added but were reported separately. Selected sub-categories of family medicine, internal medicine, pediatrics, and nurse practitioners were incorporated. Behavioral health providers and services (e.g., psychotherapy) were not included in the definition.

The final definition included all provider taxonomy codes and procedure/service codes used in the Milbank-Bailit study, which was based on Commercial payers, but expanded the lists of provider taxonomy codes and HCPCS/CPT codes to cover additional services, incorporating codes used by public payers (i.e., Medicaid and Medicare). In sum, a specification was reported for all-payer reporting.

For the NESCSO narrow definition of primary care services – Definition #1 (Defined PCPs, Selected Services) – the service code list included common services that typically are provided in a primary care setting but did not include every service that a primary care provider may provide. Such services were included in a broader definition – Definition #2 (Defined PCPs, All Services) – that was not restricted by HCPCS/CPT procedure code. States were encouraged to produce separate reporting that might show impacts of additional provider specialties or services if they desired to do so.

Collection of non-claims payments for capitated services and primary care support services was one of NESCSO's goals for this project. Some states already collect this type of information from payers, while other states do not. NESCSO developed a template (Appendix 6) for states to collect this information directly from payers.

Total Healthcare Expenditures

NESCSO and the participating states sought to measure primary care payments as a percentage of total healthcare expenditures. This measure is heavily influenced by how the denominator of healthcare payments is defined. Some previous studies and reports have lacked in providing the detail regarding how total healthcare expenditures were created, and there has been variation between studies that have influenced the percentage and comparability of results. Examples include:

- Inclusion or exclusion of prescription drugs
- Accounting for rebates that can influence actual payments on pharmaceuticals
- Inclusion or exclusion of dental and vision services
- Inclusion or exclusion of behavioral health claims
- Use of payer paid or allowed amounts (payer plus member out-of-pocket)
- Inclusion or exclusion of social support services paid by Medicaid
- Inclusion or exclusion of fee-for-service equivalency amounts for capitated services in claims data
- Identification of claims paid as primary

For example, if retail pharmacy claims represent 20%–25% of total healthcare cost, results of a study that include pharmacy in the denominator (e.g., Milbank-Bailit) will be lower than results of a study that did not include retail pharmacy in the denominator (e.g., Oregon). NESCSO asked the states to report separately retail pharmacy, vision, dental, and fee-for-service equivalency payments. Social support services paid by Medicaid that are not medical services (e.g., transportation) also inflate the denominator and reduce primary care as a percentage of total healthcare expenditures. NESCSO states were asked to exclude Medicaid social support services and report the total amount excluded.

Data Sources & Report Specifications

Data Collection – Distributed Model

This NESCSO study used a distributed model to provide reporting specifications to the states for their retrieval of summary data results. In collaboration with physician and other consultants, NESCSO and Onpoint reviewed specifications for methods and summary report formats with the participating states. Each state then prepared the data from their APCD or, in a few cases, from payer data housed outside of the APCD. A form to collect non-claims primary care payments and payments from each state also was developed and supplied to the states.

Data Sources

All six participating New England states have an APCD. This was the primary source of data for this study. State APCDs varied in populations and data included. Although APCD data collections have been standardized to a degree, there are state variations that include the following:

- Limits on inclusion of plans with small memberships
- Inclusion of members living out-of-state
- Availability of self-insured Commercial data due to the U.S. Supreme Court's 2016 decision in the case of *Gobeille vs. Liberty Mutual Insurance Company*
- Types of Medicaid information included
- Major payer types and specific payers included

- Most current year of data available by payer type
- Collection of capitated fee-for-service equivalency amounts on the claims
- Collection of non-claims payments for capitated services and other primary care supports
- Ability to join pharmacy carve-outs
- Availability of identified vs. de-identified member information to construct a member ID

Due to these variances, all reporting requested from the states was separated by service year and payer type (i.e., Commercial, Medicare Advantage, Medicare FFS, Medicaid FFS, Medicaid managed care).

Summary Report Specifications

The process for developing a specification for summary report formats and methods is described in the "Defining Primary Care Providers & Services" section at the beginning of this appendix. This included review of previous studies; review with NESCSO, physicians, and consultants; and review and modification of draft specifications with the NESCSCO Primary Care Investment Workgroup. Detailed written specifications requested each state to run six claims-based reports (Appendix 5) and one non-claims-based report (Appendix 6) with instructions as follows:

- **Report #1. Claims Payments by Primary Payer.** Report denominator and numerator results by incurred calendar year and primary payer type.
- **Report #2. Claims Payments by Primary Payer & Individual Payer.** Report denominator and numerator results by incurred calendar year, primary payer type, and specific payer (if applicable). Results for specific payers will not be reported publicly and will be used only for internal quality assurance (QA).
- **Report #3. Claims Payments by Primary Payer & Service Category.** Report denominator results by incurred calendar year, primary payer type, and service category. Results will not be reported publicly and will be used only for internal QA.
- **Report #4. Claims Payments by Primary Payer, Age, & Gender.** Report denominator and numerator results by incurred calendar year, primary payer type, and age/gender stratifications.
- **Report #5. Claims Payments by Primary Payer & Specialty Category.** Report numerator results by incurred calendar year, primary payer type, and primary care provider specialty category based on taxonomy coding.
- **Report #6. Claims Payments by Primary Payer & Procedure Category.** Report numerator results by incurred calendar year, primary payer type, and service procedure category.
- **Report #7. Non-Claims Payments by Primary Payer.** Report non-claims payments by incurred calendar year and primary payer type.

All reports were stratified by calendar year of service and payer type (i.e., Commercial, Medicare Advantage, Medicare FFS, Medicaid FFS, Medicaid managed care). The specification details related to both denominator and numerator measurement in Appendix 5 and included the following directions regarding inclusions and exclusions:

- Use the claim allowed amount (i.e., sum the plan paid, copay, coinsurance, deductible amounts)
- Include fee-for-service equivalency claim amounts for capitated services and report these separately
- Use claims paid as primary only, which eliminates secondary payers and avoids duplicating allowed amounts (e.g., Medicare supplemental plans in Commercial data sources)

- Include only claims for members with in-state residency
- Limit Medicaid claims to members under the age of 65 years
- Remove intermediate care and residential facility claim
- Remove social support service claims (e.g., transportation services) from Medicaid and report the total amount excluded
- Report separately vision and dental claims
- Pull Commercial, Medicaid, and Medicare eligibility member months to provide a denominator for validation reports to validate per member per month (PMPM) rates by payer and payer type
- Report retail pharmacy eligibility and claims by payer type (Note: NESCSO's intent was to include pharmacy as part of the denominator, but the ability to fully align pharmacy payments with the medical population and medical claims represented a challenge for some states and for some carve-out PBM data.)

States with local knowledge of their APCD data and specific payers were allowed some flexibility in how to implement the inclusions and exclusions detailed above. For example, a state without sufficient information in its APCD to remove Medicaid social support service claims could use an external Medicaid source or Form CMS-64 reporting to estimate the amount that should be excluded.

Primary Care Payments – Claims Based

To calculate the primary care expenditure numerator, four different measure definitions were developed, corresponding to the "narrow" and "broad" definitions utilized for this study. The specification for these four definitions is provided in Appendix 5, which also includes the taxonomy codes and provides the service procedure codes (CPT, HCPCS, and UB revenue codes).

- **Definition #1 (Defined PCPs, Selected Services):** Primary care providers performing primary care services. Definition #1 is narrower and service based.
- **Definition #2 (Defined PCPs, All Services):** Primary care providers without regard to service type. Definition #2 is a broader measure that does not restrict on service codes.
- **Definition #3 (OB/GYNs, Selected OB/GYN Services):** OB/GYN providers performing OB/GYN services. Definition #3 is a measure of OB/GYN services provided by OB/GYN providers that excludes all services provided by PCPs. Thus, payments reported in Definition #3 can be added to definitions #1 or #2 as desired.
- **Definition #4 (Defined PCPs, Selected OB/GYN Services):** Primary care providers performing selected OB/GYN services. Definition #4 is a measure of OB/GYN services that excludes all primary-care services and services provided by OB/GYNs. Thus, payments reported in Definition #4 can be added to definitions #1 or #2 as desired.

For some provider taxonomy codes (e.g., OB/GYN), service exclusions were made consistently regardless of definition. In addition to other exclusions previously described, inpatient claims and outpatient emergency department claims were excluded from the primary care expenditure numerator. Whenever possible, the rendering provider's reported taxonomy on the claim service line was used first. If that was unavailable or missing, the rendering provider's primary taxonomy from the most recent version of the National Plan and Provider Enumeration System (NPPES) was used to identify the taxonomy.

The primary care provider definition included taxonomy codes for general practice, family medicine, pediatrics, internal medicine, nurse provider, and physician assistant. Specific sub-specialties by taxonomy code are provided in Appendix 5. Primary care services included office visits, preventive visits, visit codes used by public payers, consultation services, selected preventive services, telehealth services, immunization services, chronic care management services, advanced care planning, prolonged services, and home visits.

Services that may be performed by OB/GYNs or, in some cases, by primary care providers included contraception insertion and removal, newborn care services, selected gynecological services, delivery, antepartum, and postpartum care services. Specific service codes are provided in Appendix 5.

Not all primary care services are billed on professional claims. In some cases, providers bill and payers process and pay for primary care services on facility claims. For these claims, it is not always possible to determine the exact specialty of the provider. Rather the provider is identified as a Federally Qualified Health Center (FQHC), a Rural Health Center (RHC), a Critical Access Hospital (CAH), a clinic, or a rural hospital. The taxonomy codes for these providers were included but were restricted by procedure codes (i.e., CPT, HCPCS, and UB revenue codes) for all NESCSO definitions. This information is also provided in Appendix 5.

Primary Care Payments - Non-Claims Based

While some states have begun collecting this type of information from payers, most have not. NESCSO built a reporting template for the states to collect information by category from payers. This included the collection of the following types of information:

- Capitated or salaried payments
- Risk-based reconciliation
- Patient-centered primary care homes (PCPCHs) / medical homes (PCMHs)
- Provider incentives (retrospective and prospective) for performance-based payments
- Health information technology (HIT) structural changes
- Workforce payments

RAND Corporation recently completed a 2020 research report that provides detailed background and proposals for collecting non-claims expenditure and payment data. For details, see “Advancing the Development of a Framework to Capture Non-Fee-for-Service Health Care Spending for Primary Care” (Carman, Reid, Damberg), which was supported by the Milbank Memorial Fund and which may be of relevance to such considerations: https://www.rand.org/pubs/research_reports/RRA204-1.html.

Appendix 5. NESCSO Primary Care Expenditure Reporting Specification to NESCSO Participating States (Version 1.1)

Introduction

A primary goal of the primary-care expenditures reporting project led by the New England States Consortium Systems Organization (NESCSO) is to report the percentage of total health expenditures (denominator) that are attributable to primary care expenditures (numerator) by major payer type.

This specifications document provides information about the inclusion and exclusion criteria for the numerator and denominator categories. There are seven separate reports: Six are claims-based and the seventh collects information on capitation and other primary care investments not available in claims data.

The report formats as well as detailed specifications regarding the four different numerator measures for primary care expenditures, and the taxonomy and procedure code lists for the numerators are provided in a companion Excel document.

It is recommended that each state's team carefully review these specifications, the report formats, and taxonomy and procedure codes prior to initiating any coding. If you have any questions about these items or the reporting specifications, please contact Onpoint's NESCSO support team at nescso-support@onpointhealthdata.org. We are here to help.

Orientation to the Specifications

This document specifies how states are requested to report results for the NESCSO primary care study using the following steps:

1. Pull claims paid as primary (reports #1 – #6)
    a. Numerator calculation (Primary care expenditures)
2. Pull eligibility for validation purposes
3. Pull any supplemental non-claims data (Report #7)
    a. Flag characteristics (e.g., capitation, type of primary care investment)
4. Report results according to report formats

Step 1: Pull Claims Paid as Primary

Claims will be pulled regardless of eligibility. The allowed amount (member and plan responsibility) from claims paid as primary will be reported as the expenditures in this study.

Medical Claims

- Pull medical claims paid as primary
    - The intent is to not include secondary payer allowed amounts to avoid duplication.
    - Do not include supplemental claims (e.g., claim status '02' if available).
    - Exclude claims that are fully denied or orphaned (i.e., paid/adjusted without a substantiating original claim).

  - A state may use a claim status indicator to limit to records for the primary payer. In prior work, Onpoint has included '01', '19', missing, and invalid values to determine claims paid as primary. The missing and invalid values are included in case a submitter does not supply the information.
  - States may also choose to use their own logic to define claims paid as primary.
  - If a claim is paid as primary for the same member, date of service, and service by more than one payer type (e.g., commercial, Medicaid, Medicare Advantage, Medicare FFS), report the claim to both payer types.
  - If a claim is paid as primary for the same member, date of service, and service by more than one payer within a given payer type (e.g., commercial Aetna and Cigna), report the claim to one of the commercial payers (e.g., Aetna or Cigna).
  - **Regardless of the method, please include a description of the method to select claims paid as primary in tab *12. Notes to Onpoint.***

- Include service dates in the applicable calendar year(s). Include three months' run-out for each incurred calendar year. Provide the same amount of run-out in each year. For example, for dates incurred in 2017, paid dates should be reported for the incurred calendar year period between 1/1/2017 and 3/31/2018.
- Limit to in-state residents using zip code on the claim or an out-of-state indicator. **Please include a description of the method to limit to in-state residents in tab *12. Notes to Onpoint.***
- Claims do not need to be linked to eligibility. When reporting by major payer type, report by the payer type on the claim. Eligibility member months will be reported independently for quality assurance (QA) purposes.
- For Medicaid, include individuals with an age of less than 65 years. In other words, exclude Medicaid individuals aged 65 years or older.
- Remove claims related to Medicaid social support services. The intent of this exclusion is to avoid inflating Medicaid total expenditures (denominator) which in turn would decrease the percent of primary care expenditures. These services are typically services that only Medicaid pays for and are not paid for by commercial or Medicare payers. Many of these services may be identified using HCPCS codes starting with the letter T, but not all T codes should be excluded (e.g., T1015). These services will vary from state to state and include non-medical services such as home- and community-based services, day treatment, residential care, some school-based services such as paid by the Department of Education, transportation, personal care services, services for children in foster case, and case management. These services are most likely to be found in the Medicaid FFS claims and not in Medicaid managed care. Note that Report #4 requires reporting by age and gender groups which will require these exclusions to be made or estimated by age and gender. **Please include both a description of the method and the allowed amount or an estimate of the allowed amount for the Medicaid social support services exclusion in tab *12. Notes to Onpoint.***
- Pull the age and gender values from claims. Generally, the age in claims is calculated by subtracting the date of birth from the service date. Since we are not linking claims to eligibility, the age/gender values for Report #4 will come from medical claims.
- Remove claims related to intermediate care facilities (ICFs) and residential facilities. Both types of facilities can be identified in the "Categories of Service" tab. ICFs feature the first two characters of their reported bill type of "65," "66", and "67" while the bill type reported for residential facility claims begins with "86". **If a state has other methods to identify ICF and residential facility claims by specific payers (e.g., Medicaid), please include a description of the method in tab *12. Notes to Onpoint.***

- Calculate total expenditures as the sum of plan paid and member responsibilities (i.e., plan paid + deductible + coinsurance + copay). We also refer to the sum of plan and member responsibilities as the allowed amount.
- Calculate total FFS equivalency expenditures when applicable. This information will vary by state. If applicable, calculate as the sum of the fee for service equivalency field(s). Fee-for-service equivalency are typically what the health plan would have paid for a service covered under a capitation payment arrangement if the service had been paid on a FFS basis. The field(s) that include these amounts may vary be state (e.g., fee-for-service equivalent amount, prepaid amount, etc.).
- Define the category of service using the accompanying document "NESCSO Primary Care Specifications – Categories of Service." There are four categories of service:
    1. Inpatient facility (rows 5–11; intermediate care facilities (ICFs) and residential care facilities are excluded)
    2. Outpatient facility (rows 12–20)
    3. Professional (rows 21–33)
    4. Other services (Row 34; a catch-all for medical services that do not fall into the categories above)
- As available, define and subset selected vision claims for separate reporting. Exclude specific vision payers (e.g., VSP, EyeMed), as not all states will have this information. For purposes of this analysis, a vision claim is any claim from the medical claim file with Healthcare Common Procedure Coding System (HCPCS) codes V2020–V2799 or 92002-92014. Expenditures for these claims should be removed from the medical claim total in the report denominator and be reported as a separate column in the denominator. **If a state used an alternative method for identifying vision, please include a description in tab *12. Notes to Onpoint.***
- Define and subset selected dental claims for separate reporting. Exclude specific dental payers (e.g., Delta Dental), as not all states will have this information. For purposes of this analysis, a dental claim is either any claim from the medical claim file with a HCPCS code that starts with "D" or dental claims that exist in a separate data source. Expenditures for these claims should be removed from the medical claim total in the report denominator and be reported as a separate column in the denominator**. If a state used an alternative method for identifying dental, please include a description in tab 12. Notes to Onpoint.**
- Include mental health or substance abuse claims if available. For example, include claims with commercial behavioral health carve-outs in the total expenditure denominator.
- Do not exclude pharmacy in medical claims (e.g., biologics, chemotherapy, injectables)

Pharmacy Claims Paid as Primary

- Pull pharmacy claims with service dates (prescription filled dates) in the applicable calendar year(s) and with the following criteria:
    - The intent is to not include secondary payer allowed amounts to avoid duplication.
    - Do not include supplemental claims (e.g., claim status '02' if available).
    - Exclude claims that are fully denied or orphaned (i.e., paid/adjusted without a substantiating original claim).

  - A state may use a claim status indicator to limit to records for the primary payer. In prior work, Onpoint has included '01', '19', missing, and invalid values to determine claims paid as primary. The missing and invalid values are included in case a submitter does not supply the information.
  - States may also choose to use their own logic to define claims paid as primary.
  - **Regardless of the method, please include a description of the method to define paid as primary in tab *12. Notes to Onpoint.***

- Include three months' run-out for each incurred calendar year. Provide the same amount of run-out in each year. For example, for prescription filled dates incurred in 2017, paid dates should be reported for the incurred calendar year period between 1/1/2017 and 3/31/2018.
- Where possible, use the product code from pharmacy claims to separate major payer types. For example, a product code of 'MD' may indicate Medicare Part D. Pharmacy claims with 'MD' product should be reported as Medicare FFS instead of commercial. Please note that for Medicare Part D, some APCDs receive duplicates – Part D reported by the commercial plans and Part D reported by Medicare FFS. Please include only Part D from commercial submitters to avoid duplication.
- Include claims in the state's pharmacy data file (e.g., retail pharmacy). Do not include pharmacy in the medical claims.
- Calculate total pharmacy expenditures as the sum of plan paid and member responsibility (e.g., plan paid + deductible + copay). We also refer to the sum of plan and member responsibilities as the allowed amount.

Step 1A: Numerator Calculation (Primary Care Expenditures)

Using the medical claims pool identified above, use the provider specialty and procedure code information to flag the four definitions below. The definitions also are defined in more detail in the companion Excel document.

Regarding taxonomy codes, whenever possible, first use the rendering provider taxonomy on the claim service line. If that is unavailable or missing, use the primary taxonomy from the most recent version of the National Plan and Provider Enumeration System (NPPES) repository to identify the taxonomy.

Please note there has been an update since Version 1.0 to reflect additional revenue codes (i.e., 0519, 0529, 0969) for facility taxonomies.

For procedures, use the Common Procedural Technology (CPT) or HCPCS code from the claim service line.

1. **Definition #1:** Primary care providers performing primary care services
   a. Identify primary care providers by taxonomy. Using the "Taxonomy Codes" tab, limit the "Primary Care or OB/GYN" field (Column D) to "Primary Care". (Please note that some taxonomies require additional limitation to procedure and/or revenue codes. For example, taxonomy code "207QH0002X" ("Taxonomy Codes" tab, Row 10) requires additional restriction to hospice and home health procedure codes ("Procedure Codes" tab, rows 64–72).
   b. Using the "Procedure Codes" tab, identify primary care services by limiting the "Primary Care or OB/GYN" field (Column C) to "Primary Care".
   c. Flag claims as Definition #1 if they meet the characteristics defined in both 1(a) and 1(b) above.
2. **Definition #2:** Primary care providers without regard to procedure (excluding OB/GYN)

a. Identify primary care providers by taxonomy. Using the "Taxonomy Codes" tab, limit the "Primary Care or OB/GYN" field (Column D) to "Primary Care". Please note that some taxonomies require additional limitation to procedures and/or revenue codes. For example, taxonomy code "207QH0002X" ("Taxonomy Codes" tab, Row 10) requires additional restriction to home hospice and home health procedure codes ("Procedure Codes" tab, rows 64–72).

b. Flag claims as Definition #2 if they meet the characteristics defined in 2(a) and are not OB/GYN providers or services.

3. **Definition #3:** OB/GYN providers performing OB/GYN services

   a. Identify OB/GYN providers with an OB/GYN taxonomy. Applicable taxonomies are identified in the "Taxonomy Codes" tab by limiting the "Primary Care or OB/GYN" field to "OB/GYN".

   b. Identify OB/GYN services by including claims with an applicable CPT/HCPCS code. Applicable procedure codes are identified in the "Procedure Codes" tab where the "Primary Care or OB/GYN" field equals "OB/GYN".

   c. Flag claims as Definition #3 if they meet the characteristics defined in both 3(a) and 3(b).

4. **Definition #4**: Primary care providers performing selected OB/GYN services

   a. Identify primary care providers by taxonomy. Using the "Taxonomy Codes" tab, limit the "Primary Care or OB/GYN" field (column D) to "Primary Care". Please note that some taxonomies require additional limitation to procedures and/or revenue codes. For example, taxonomy code "207QH0002X" ("Taxonomy Codes" tab, Row 10) requires additional restriction to hospice and home health procedure codes ("Procedure Codes" tab, rows 64–72).

   b. Identify OB/GYN services by including claims with an applicable CPT/HCPCS code. Applicable procedure codes are identified in the "Procedures" tab where the "Primary Care or OB/GYN" field equals "OB/GYN".

   c. Flag claims as Definition #4 if they meet the characteristics defined in both 4(a) and 4(b).

5. Pull the taxonomy category from the "Report Specialty Category" column ("Taxonomy Codes" tab, Column E) to the claim file. For example, a claim with a taxonomy code of "208D00000X" should be listed as "General Practice". This field will be used for Report #5, described in further detail below.

6. Pull the procedure category from the "Reporting Procedure Category" ("Procedure Codes" tab, Column D) to the claim file. For example, a claim with a procedure code of "99201" would be listed as "Office Visits". This field will be used for Report #6, described in further detail below.

Step 2: Pull Eligibility for Validation Purposes

Member months, calculated from eligibility records, will be used to validate results. For example, one metric is a Per Member Per Month (PMPM) calculation by payer to identify any drivers of differences.

- Include state residents (members that reside within the state) using zip code or an out-of-state indicator. **Please include a description of the method to limit to in-state residents in tab *12. Notes to Onpoint.***
- Include eligibility dates for incurred calendar years 2017–2018.
  - If 2018 is not available, use the two most-current complete incurred calendar years such as 2016–2017.
  - There are no continuous enrollment criteria. Include all members with any eligibility in a given calendar year. Some of these members will not have claims.

- Include individual payer as the data/agreement(s) allows. Note that Report #2 ("Claims Payments by Primary Payer & Individual Payer") will be used only for quality assurance purposes and will not be reported publicly. We understand that some states will not be able to provide this information.
- Limit to records for the primary payer. This may look different from state to state; guidelines include:
  - Pull each member's enrollment records by month.
  - Include all members that have only one enrollment record in a given month.

    For members with more than one enrollment record in a given month, use the records from the payer indicated as primary in the enrollment file. If an individual has two records listed as primary in eligibility in the same month within a major payer (e.g., commercial Cigna and commercial Aetna), use logic to choose one record. If an individual has two records listed as primary in eligibility across major payers (e.g., commercial, Medicaid, Medicare Advantage, Medicare FFS), include all records. **Please include a description of the method in tab *12. Notes to Onpoint.***
- Report member months.
  - Include medical member months from medical eligibility.
  - Include pharmacy member months from pharmacy eligibility. Note that pharmacy member months will be reported separately from medical member months.
  - Do not report behavioral carve-out payer member months to avoid duplication.
- Apply payer-specific logic:
  - Commercial
    - » Include individuals with commercial coverage not related to public payers (i.e., exclude from this category any products for Medicare Advantage, Medicaid managed care, Medicare Supplemental, etc.).
    - » Report entire commercial population. In other words, include both self and fully insured commercial populations in one line for 'Commercial – All' in the reporting.
    - » If possible, fully insured vs. self-insured according to the appropriate logic for your state. A self-insured plan is one in which the employer assumes the financial risk for providing healthcare benefits (e.g., employers pay for claims out-of-pocket in place of a premium). In some APCDs, there are Coverage Type Code values of "ASO" or "ASW" that indicate self-insured plans. **Report the eligibility for self-insured plans, or estimate for eligibility for self-insured plans in the '12 Notes to Onpoint' tab.**
    - » Exclude any payers where the state has local knowledge that the payer has problematic data (e.g., PMPM = $3.00).
  - Medicaid
    - » Include Medicaid from both the U.S. Centers for Medicare & Medicaid Services (CMS) and commercial data sources (i.e., managed care).
    - » Include individuals with an age of less than 65 years.
    - » Limit to individuals with full Medicaid benefits as the data allows. This may vary state to state (e.g., limiting to members with all Medicaid benefits compared to supplemental or partial coverage). **Please include a description of the method to limit to full Medicaid benefits in tab *12. Notes to Onpoint.***

- Identify and distinguish Medicaid managed care and Medicaid fee-for-service (FFS) as the data allows. Pull Medicaid managed care eligibility from the commercial eligibility records to avoid double counting members if the eligibility information is submitted by both the commercial plan and Medicaid.
- Exclude members with eligibility in the following programs since Medicaid pays Medicare premiums for these members.
  - QMB (Qualified Medicare Beneficiary)
  - SLMB (Special Low-income Medicare beneficiary
  - QI (Qualified Individual)

- Medicare
  - Include Medicare from a CMS data source or Medicare from a commercial source (e.g., Medicare Advantage).
  - Include all ages.
  - Exclude Medicare supplemental plans.
  - Identify and distinguish Medicare FFS vs Medicare Advantage. Pull Medicare advantage eligibility from the commercial eligibility records to avoid double counting members if the eligibility information is submitted by both the commercial plan and Medicare.
- Suggested validation(s):
  - The maximum member-month value for a member in a given calendar year by major payer type should be 12.

Step 3: Pull Any Supplemental Non-Claims Data

Please provide non-claims payments for the state in Report #7 in the report template. Non-claims payments encompass capitated payments for healthcare services as well as other primary care investments. Capitated payments are fixed payments per patient per unit of time (e.g., a monthly payment per ACO member).

We request that you report investments by distinct primary payer type (i.e., Commercial Self-Insured, Commercial Fully Insured, Medicaid Managed Care, Medicaid Fee-for-Service, Medicare Advantage, Medicare Fee-for-Service) but please provide the information at the applicable grain. For example, if an investment is applied to only the commercial population, please populate primary payer type as "Commercial - All". Similarly, if an investment is applicable to the entire population, please populate "Universal" as the primary payer type. Provide any additional comments in the "Notes & Limitations" column (Column F) to capture and report this information.

When applicable, please provide the three categories of non-claims primary care investment for a given year and primary payer type that are included in Report #7 and described in detail below. It is understood that some of the requested information may not be available or have the capability to be broken out in the manner described for each state. For example, we understand that some capitated payments may cover primary care as well as other services, and it may be impossible to separate the primary care payments from the total payments. Please include these total amounts in the non-claims payments for all capitated services and do not report in the non-claims payments for primary care services.

For purposes of this study, we are including value-based payments as part of the other non-claims primary care investment payments. We understand that a value-based payment may cover more than just primary care

services. Please note that if the payment supports any part of primary care (e.g., providers and services) it should be considered as part of this category.

Categories are defined below:

- Total Non-Claims Payments for Capitated Services (All Providers & Services)
  - Include total payments for capitated services when applicable. These payments cover all services and providers, including but not limited to primary care. The goal of collecting this information is to determine, when possible, a denominator for capitated payments.
- Total Non-Claims Payments for Capitated Services (Primary Care)
  - Include total payments for capitated primary care services if available. These payments are a subset of the amount above and include only capitated payments related to primary care.
  - For example, Health Homes (PMPM payment to primary care practices and community health teams)
- Other Non-Claims Primary Care Investment
  - Include total primary care investment payments that are not paid on a capitated basis. Investment payments may cover primary care as well as other services. Examples include:
    - » Risk-based payments (e.g., payments or penalties based on performance and/or related to standards or benchmarks, etc.)
    - » Payments for primary care medical home or patient-centered medical home or patient-centered medical home recognition
    - » Value-based payments (e.g., payments for achievement of quality/cost-savings goals, Accountable Communities Program, etc.)
    - » Payments to develop capacity to improve care for a defined population of patients (e.g., patients with chronic conditions)
    - » Payments to help providers adopt health information technology (e.g., electronic health records)
    - » Payments or expenses for supplemental staff such as practice coaches, patient educators, patient navigators, or nurse care managers

Step 4: Report Results According to Report Formats

Once the eligibility and claims information has been pulled and flagged, produce the seven reports listed in the companion Excel document.

- **Report #1 ("Claims Payments by Primary Payer")** – Report denominator and numerator results by incurred calendar year and primary payer type
  - **Column C:** Calculate unique members as the count of distinct members (universal member identifier) from medical eligibility
  - **Column D:** Calculate medical member months as the sum of medical member months from medical eligibility
  - **Column E:** Calculate pharmacy member months as the sum of pharmacy member months from pharmacy eligibility

- **Column F:** Calculate total medical claims expenditures as the sum of allowed amount (i.e., plan paid + deductible + coinsurance + copay) for medical claims, excluding dental, vision, and the FFS equivalency amount
- **Column G:** Calculate total medical claims FFS equivalency expenditures as the sum of the FFS equivalency field(s) from medical claims
- **Column H:** Calculate total pharmacy claims expenditures as the sum of allowed amount from pharmacy claims
- **Column I:** Calculate total dental claims expenditures as the sum of allowed amount from the subset dental claims
- **Column J:** Calculate total vision claims expenditures as the sum of allowed amount from the subset vision claims
- For each of the primary care definitions, calculate
  - **Columns K–N:** Sum of allowed amount (excluding FFS equivalency amounts)
  - **Columns O–R:** Sum of FFS equivalency amount(s)

- **Report #2 ("Claims Payments by Primary Payer & Individual Payer")** – Report denominator and numerator results by incurred calendar year, primary payer type, and specific payer (if applicable). Results for specific payers will not be reported publicly and will be used only for internal QA.
  - **Column D:** Calculate unique members as the count of distinct members (universal member identifier) from medical eligibility
  - **Column E:** Calculate medical member months as the sum of medical member months from medical eligibility
  - **Column F:** Calculate pharmacy member months as the sum of pharmacy member months from pharmacy eligibility
  - **Column G:** Calculate total medical claims expenditures as the sum of allowed amount (plan and member responsibility) for medical claims, excluding dental, vision, and the FFS equivalency amount
  - **Column H:** Calculate total medical claims FFS equivalency expenditures as the sum of the FFS equivalency field(s) from medical claims
  - **Column I:** Calculate total pharmacy claims expenditures as the sum of plan and member responsibility from pharmacy claims
  - **Column J:** Calculate total dental claims expenditures as the sum of plan and member responsibility from the subset dental claims
  - **Column K:** Calculate total vision claims expenditures as the sum of plan and member responsibility from the subset vision claims
  - For each of the primary care definitions, calculate
    - **Columns L–O:** Sum of plan and member responsibility (excluding FFS equivalency amounts)
    - **Columns P–S:** Sum of FFS equivalency amount(s)
- **Report #3 ("Claims Payments by Primary Payer & Service Category")** – Report denominator results by incurred calendar year, primary payer type, and service category. Results will not be reported publicly and will be used only for internal QA.

- **Column D:** Calculate total medical claims expenditures as the sum of allowed amount (plan and member responsibility) for medical claims, excluding dental, vision, and the FFS equivalency amount
- **Column E:** Calculate total medical claims FFS equivalency expenditures as the sum of the FFS equivalency field(s) from medical claims
- **Column F:** Calculate total pharmacy claims expenditures as the sum of plan and member responsibility from pharmacy claims
- **Column G:** Calculate total dental claims expenditures as the sum of plan and member responsibility from the subset dental claims
- **Column H:** Calculate total vision claims expenditures as the sum of plan and member responsibility from the subset vision claims

- **Report #4 ("Claims Payments by Primary Payer, Age, & Gender")** – Report denominator and numerator results by incurred calendar year, primary payer type, and age and gender stratifications
  - **Column E:** Calculate unique members as the count of distinct members (universal member identifier) from medical eligibility
  - **Column F:** Calculate medical member months as the sum of medical member months from medical eligibility
  - **Column G:** Calculate pharmacy member months as the sum of pharmacy member months from pharmacy eligibility
  - **Column H:** Calculate total medical claims expenditures as the sum of allowed amount (plan and member responsibility) for medical claims, excluding dental, vision, and the FFS equivalency amount
  - **Column I:** Calculate total medical claims FFS equivalency expenditures as the sum of the FFS equivalency field(s) from medical claims
  - **Column J:** Calculate total pharmacy claims expenditures as the sum of plan and member responsibility from pharmacy claims
  - **Column K:** Calculate total dental claims expenditures as the sum of plan and member responsibility from the subset dental claims
  - **Column L:** Calculate total vision claims expenditures as the sum of plan and member responsibility from the subset vision claims.
  - For each of the primary care definitions, calculate
    - **Columns M–P:** Sum of plan and member responsibility (excluding FFS equivalency amounts)
    - **Columns Q–T:** Sum of FFS equivalency amount(s)
- **Report #5 ("Claims Payments by Primary Payer & Specialty Category")** – Report numerator results by incurred calendar year, primary payer type, and specialty category (available in the "Taxonomy Codes" tab)
  - For each of the primary care definitions, calculate the following:
    - **Columns D–G:** Sum of plan and member responsibility (excluding FFS equivalency amounts)
    - **Columns H–K:** Sum of FFS equivalency amount(s)

- **Report #6 ("Claims Payments by Primary Payer & Procedure Category")** – Report numerator results by incurred calendar year, primary payer type, and procedure category (available in the "Procedure Codes" tab)
  - For each of the primary care definitions, calculate the following:
    - **Columns D–G:** Sum of plan and member responsibility (excluding FFS equivalency amounts)
    - **Columns H–K:** Sum of FFS equivalency amount(s)
- **Report #7 ("Non-Claims Payments")** – Report non-claims payments by incurred calendar year and primary payer type. Please note that these reporting requirements are described above in the "Pull Any Supplemental Non-Claims Data" section.

NESCSO Provider Taxonomy Codes & Reporting Categories (Version 1.1)

Taxonomy Code	Description	Notes or Restrictions	Primary Care or OB/GYN	Report Specialty Category
208D00000X	General Practice		Primary Care	General Practice
207Q00000X	Family Medicine		Primary Care	Family Medicine
207QA0000X	Family Medicine, Adolescent Medicine		Primary Care	Family Medicine
207QA0505X	Family Medicine, Adult Medicine		Primary Care	Family Medicine
207QG0300X	Family Medicine, Geriatric Medicine		Primary Care	Family Medicine
207QH0002X	Family Medicine, Hospice Palliative	Restrict to only home health and hospice procedure codes	Primary Care	Family Medicine
208000000X	Pediatrics		Primary Care	Pediatrics
2080A0000X	Pediatrics, Adolescent Medicine		Primary Care	Pediatrics
2080H0002X	Pediatrics, Hospice and Palliative Medicine	Restrict to only home health and hospice procedure codes	Primary Care	Pediatrics
207R00000X	Internal Medicine		Primary Care	Internal Medicine
207RG0300X	Internal Medicine, Geriatric Medicine		Primary Care	Internal Medicine
207RA0000X	Internal Medicine, Adolescent Medicine		Primary Care	Internal Medicine
207RH0002X	Internal Medicine, Hospice and Palliative Medicine	Restrict to only home health and hospice procedure codes	Primary Care	Internal Medicine
363A00000X	Physician Assistant		Primary Care	Physician Assistant
363AM0700X	Physician Assistant, Medical		Primary Care	Physician Assistant
363L00000X	Nurse Practitioner		Primary Care	Nurse Practitioner
363LA2200X	Nurse Practitioner, Adult Health		Primary Care	Nurse Practitioner
363LF0000X	Nurse Practitioner, Family		Primary Care	Nurse Practitioner
363LG0600X	Nurse Practitioner, Gerontology		Primary Care	Nurse Practitioner
363LP0200X	Nurse Practitioner, Pediatrics		Primary Care	Nurse Practitioner
363LP2300X	Nurse Practitioner, Primary Care		Primary Care	Nurse Practitioner
363LC1500X	Nurse Practitioner, Community Health	Always restrict on the procedure code list	Primary Care	Nurse Practitioner
363LS0200X	Nurse Practitioner, School	Always restrict on the procedure code list	Primary Care	Nurse Practitioner
261QF0400X	Federally Qualified Health Center (FQHC)	Restrict by procedure code list AND restrict on revenue codes for clinic and professional services: 0510, 0515, 0517, 0519, 0520, 0521, 0523, 0529, 0960, 0969, 0983	Primary Care	FQHC AHC Facility Taxonomy
261QR1300X	Clinic/Center, Rural Health		Primary Care	RHC AHC Facility Taxonomy
261QP2300X	Clinic/Center, Primary Care		Primary Care	Primary Care AHC Facility Taxonomy
282NR1301X	Rural Hospital		Primary Care	Rural Hospital Taxonomy
261QC0050X	Critical Access Hospital		Primary Care	Critical Access Hospital Taxonomy
282NC0060X	Critical Access Hospital		Primary Care	Critical Access Hospital Taxonomy

Taxonomy Code	Description	Notes or Restrictions	Primary Care or OB/GYN	Report Specialty Category
363LX0001X	Nurse Practitioner, Obstetrics & Gynecology	Restrict to only the delivery, antepartum, postpartum, newborn care, gynecological service, and contraception care service list	OB/GYN	Obstetrics & Gynecology
363LW0102X	Nurse Practitioner, Women's Health		OB/GYN	Obstetrics & Gynecology
207V00000X	Obstetrics & Gynecology		OB/GYN	Obstetrics & Gynecology
207VG0400X	Obstetrics & Gynecology, Gynecology		OB/GYN	Obstetrics & Gynecology
176B00000X	Midwife		OB/GYN	Obstetrics & Gynecology
367A00000X	Midwife, Certified Nurse		OB/GYN	Obstetrics & Gynecology

NESCSO Primary Care Service Codes & Reporting Categories (Version 1.1)

Procedure Code	Description	Primary Care or OB/GYN	Reporting Procedure Category
99201	OFFICE OUTPATIENT NEW 10 MINUTES	Primary Care	Office Visits
99202	OFFICE OUTPATIENT NEW 20 MINUTES	Primary Care	Office Visits
99203	OFFICE OUTPATIENT NEW 30 MINUTES	Primary Care	Office Visits
99204	OFFICE OUTPATIENT NEW 45 MINUTES	Primary Care	Office Visits
99205	OFFICE OUTPATIENT NEW 60 MINUTES	Primary Care	Office Visits
99211	OFFICE OUTPATIENT VISIT 5 MINUTES	Primary Care	Office Visits
99212	OFFICE OUTPATIENT VISIT 10 MINUTES	Primary Care	Office Visits
99213	OFFICE OUTPATIENT VISIT 15 MINUTES	Primary Care	Office Visits
99214	OFFICE OUTPATIENT VISIT 25 MINUTES	Primary Care	Office Visits
99215	OFFICE OUTPATIENT VISIT 40 MINUTES	Primary Care	Office Visits
99381	INITIAL PREVENTIVE MEDICINE NEW PATIENT <1YEAR	Primary Care	Preventive Medicine Visits
99382	INITIAL PREVENTIVE MEDICINE NEW PT AGE 1-4 YRS	Primary Care	Preventive Medicine Visits
99383	INITIAL PREVENTIVE MEDICINE NEW PT AGE 5-11 YRS	Primary Care	Preventive Medicine Visits
99384	INITIAL PREVENTIVE MEDICINE NEW PT AGE 12-17 YR	Primary Care	Preventive Medicine Visits
99385	INITIAL PREVENTIVE MEDICINE NEW PT AGE 18-39YRS	Primary Care	Preventive Medicine Visits
99386	INITIAL PREVENTIVE MEDICINE NEW PATIENT 40-64YRS	Primary Care	Preventive Medicine Visits
99387	INITIAL PREVENTIVE MEDICINE NEW PATIENT 65YRS&>	Primary Care	Preventive Medicine Visits
99391	PERIODIC PREVENTIVE MED ESTABLISHED PATIENT <1Y	Primary Care	Preventive Medicine Visits
99392	PERIODIC PREVENTIVE MED EST PATIENT 1-4YRS	Primary Care	Preventive Medicine Visits
99393	PERIODIC PREVENTIVE MED EST PATIENT 5-11YRS	Primary Care	Preventive Medicine Visits
99394	PERIODIC PREVENTIVE MED EST PATIENT 12-17YRS	Primary Care	Preventive Medicine Visits
99395	PERIODIC PREVENTIVE MED EST PATIENT 18-39 YRS	Primary Care	Preventive Medicine Visits
99396	PERIODIC PREVENTIVE MED EST PATIENT 40-64YRS	Primary Care	Preventive Medicine Visits
99397	PERIODIC PREVENTIVE MED EST PATIENT 65YRS& OLDER	Primary Care	Preventive Medicine Visits
99241	OFFICE CONSULTATION NEW/ESTAB PATIENT 15 MIN	Primary Care	Consultation Services
99242	OFFICE CONSULTATION NEW/ESTAB PATIENT 30 MIN	Primary Care	Consultation Services
99243	OFFICE CONSULTATION NEW/ESTAB PATIENT 40 MIN	Primary Care	Consultation Services
99244	OFFICE CONSULTATION NEW/ESTAB PATIENT 60 MIN	Primary Care	Consultation Services
99245	OFFICE CONSULTATION NEW/ESTAB PATIENT LEVEL 5	Primary Care	Consultation Services
G0466	FEDERALLY QUALIFIED HEALTH CENTER VISIT NEW PT	Primary Care	HCPCS Visit Codes
G0467	FEDERALLY QUALIFIED HEALTH CENTER VISIT ESTAB PT	Primary Care	HCPCS Visit Codes
G0468	FEDERALLY QUALIFIED HEALTH CENTER VISIT IPPE/AWV	Primary Care	HCPCS Visit Codes
T1015	CLINIC VISIT/ENCOUNTER ALL-INCLUSIVE	Primary Care	HCPCS Visit Codes
S9117	BACK SCHOOL VISIT	Primary Care	HCPCS Visit Codes
G0402	INIT PREV PE LTD NEW BENEF DUR 1ST 12 MOS MCR	Primary Care	HCPCS Visit Codes
G0438	ANNUAL WELLNESS VISIT; PERSONALIZ PPS INIT VISIT	Primary Care	HCPCS Visit Codes
G0439	ANNUAL WELLNESS VST; PERSONALIZED PPS SUBSQT VST	Primary Care	HCPCS Visit Codes
G0463	HOSPITAL OUTPATIENT CLIN VISIT ASSESS & MGMT PT	Primary Care	HCPCS Visit Codes

Procedure Code	Description	Primary Care or OB/GYN	Reporting Procedure Category
99401	PREVENT MED COUNSEL&/RISK FACTOR REDJ SPX 15 MIN	Primary Care	Preventive Medicine Services
99402	PREVENT MED COUNSEL&/RISK FACTOR REDJ SPX 30 MIN	Primary Care	Preventive Medicine Services
99403	PREVENT MED COUNSEL&/RISK FACTOR REDJ SPX 45 MIN	Primary Care	Preventive Medicine Services
99404	PREVENT MED COUNSEL&/RISK FACTOR REDJ SPX 60 MIN	Primary Care	Preventive Medicine Services
99406	TOBACCO USE CESSATION INTERMEDIATE 3-10 MINUTES	Primary Care	Preventive Medicine Services
99407	TOBACCO USE CESSATION INTENSIVE >10 MINUTES	Primary Care	Preventive Medicine Services
99408	ALCOHOL/SUBSTANCE SCREEN & INTERVEN 15-30 MIN	Primary Care	Preventive Medicine Services
99409	ALCOHOL/SUBSTANCE SCREEN & INTERVENTION >30 MIN	Primary Care	Preventive Medicine Services
99411	PREV MED COUNSEL & RISK FACTOR REDJ GRP SPX 30 M	Primary Care	Preventive Medicine Services
99412	PREV MED COUNSEL & RISK FACTOR REDJ GRP SPX 60 M	Primary Care	Preventive Medicine Services
99420	ADMN & INTERPJ HEALTH RISK ASSESSMENT INSTRUMENT	Primary Care	Preventive Medicine Services
99429	UNLISTED PREVENTIVE MEDICINE SERVICE	Primary Care	Preventive Medicine Services
99341	HOME VISIT NEW PATIENT LOW SEVERITY 20 MINUTES	Primary Care	Home Visits
99342	HOME VISIT NEW PATIENT MOD SEVERITY 30 MINUTES	Primary Care	Home Visits
99343	HOME VST NEW PATIENT MOD-HI SEVERITY 45 MINUTES	Primary Care	Home Visits
99344	HOME VISIT NEW PATIENT HI SEVERITY 60 MINUTES	Primary Care	Home Visits
99345	HOME VISIT NEW PT UNSTABL/SIGNIF NEW PROB 75 MIN	Primary Care	Home Visits
99347	HOME VISIT EST PT SELF LIMITED/MINOR 15 MINUTES	Primary Care	Home Visits
99348	HOME VISIT EST PT LOW-MOD SEVERITY 25 MINUTES	Primary Care	Home Visits
99349	HOME VISIT EST PT MOD-HI SEVERITY 40 MINUTES	Primary Care	Home Visits
99350	HOME VST EST PT UNSTABLE/SIGNIF NEW PROB 60 MINS	Primary Care	Home Visits
99374	SUPVJ PT HOME HEALTH AGENCY MO 15-29 MINUTES	Primary Care	Hospice / Home Health Services
99375	SUPERVISION PT HOME HEALTH AGENCY MONTH 30 MIN/>	Primary Care	Hospice / Home Health Services
99376	CARE PLAN OVERSIGHT/OVER	Primary Care	Hospice / Home Health Services
99377	SUPERVISION HOSPICE PATIENT/MONTH 15-29 MIN	Primary Care	Hospice / Home Health Services
99378	SUPERVISION HOSPICE PATIENT/MONTH 30 MINUTES/>	Primary Care	Hospice / Home Health Services
G0179	PHYS RE-CERT MCR-COVR HOM HLTH SRVC RE-CERT PRD	Primary Care	Hospice / Home Health Services
G0180	PHYS CERT MCR-COVR HOM HLTH SRVC PER CERT PRD	Primary Care	Hospice / Home Health Services
G0181	PHYS SUPV PT RECV MCR-COVR SRVC HOM HLTH AGCY	Primary Care	Hospice / Home Health Services
G0182	PHYS SUPV PT UNDER MEDICARE-APPROVED HOSPICE	Primary Care	Hospice / Home Health Services
99339	INDIV PHYS SUPVJ HOME/DOM/R-HOME MO 15-29 MIN	Primary Care	Domiciliary, Rest Home Multidisciplinary Care Planning
99340	INDIV PHYS SUPVJ HOME/DOM/R-HOME MO 30 MIN/>	Primary Care	Domiciliary, Rest Home Multidisciplinary Care Planning
99495	TRANSITIONAL CARE MANAGE SRVC 14 DAY DISCHARGE	Primary Care	Transitional Care Management Services
99496	TRANSITIONAL CARE MANAGE SRVC 7 DAY DISCHARGE	Primary Care	Transitional Care Management Services
99497	ADVANCE CARE PLANNING FIRST 30 MINS	Primary Care	Advance Care Planning Evaluation & Management Services
99498	ADVANCE CARE PLANNING EA ADDL 30 MINS	Primary Care	Advance Care Planning Evaluation & Management Services
99366	TEAM CONFERENCE FACE-TO-FACE NONPHYSICIAN	Primary Care	Case Management Services
99367	TEAM CONFERENCE NON-FACE-TO-FACE PHYSICIAN	Primary Care	Case Management Services
99368	TEAM CONFERENCE NON-FACE-TO-FACE NONPHYSICIAN	Primary Care	Case Management Services
99487	CMPLX CHRON CARE MGMT W/O PT VST 1ST HR PER MO	Primary Care	Chronic Care Management Services
99489	CMPLX CHRON CARE MGMT EA ADDL 30 MIN PER MONTH	Primary Care	Chronic Care Management Services
99490	CHRON CARE MANAGEMENT SRVC 20 MIN PER MONTH	Primary Care	Chronic Care Management Services
99491	CHRON CARE MANAGEMENT SRVC 30 MIN PER MONTH	Primary Care	Chronic Care Management Services
G0506	COMP ASMT OF & CARE PLNG PT RQR CC MGMT SRVC	Primary Care	Chronic Care Management Services
99358	PROLNG E/M SVC BEFORE&/AFTER DIR PT CARE 1ST HR	Primary Care	Prolonged Services
99359	PROLNG E/M BEFORE&/AFTER DIR CARE EA 30 MINUTES	Primary Care	Prolonged Services

Procedure Code	Description	Primary Care or OB/GYN	Reporting Procedure Category
99360	PHYS STANDBY SVC PROLNG PHYS ATTN EA 30 MINUTES	Primary Care	Prolonged Services
G0513	PRLNG PREV SRVC OFC/OTH O/P RQR DIR CTC;1ST 30 M	Primary Care	Prolonged Services
G0514	PRLNG PREV SRVC OFC/OTH O/P DIR CTC;EA ADD 30 M	Primary Care	Prolonged Services
99441	PHYS/QHP TELEPHONE EVALUATION 5-10 MIN	Primary Care	Telephone and Internet Services
99442	PHYS/QHP TELEPHONE EVALUATION 11-20 MIN	Primary Care	Telephone and Internet Services
99443	PHYS/QHP TELEPHONE EVALUATION 21-30 MIN	Primary Care	Telephone and Internet Services
99444	PHYS/QHP ONLINE EVALUATION & MANAGEMENT SERVICE	Primary Care	Telephone and Internet Services
99446	NTRPROF PHONE/NTRNET/EHR ASSMT&MGMT 5-10 MIN	Primary Care	Telephone and Internet Services
99447	NTRPROF PHONE/NTRNET/EHR ASSMT&MGMT 11-20 MIN	Primary Care	Telephone and Internet Services
99448	NTRPROF PHONE/NTRNET/EHR ASSMT&MGMT 21-30 MIN	Primary Care	Telephone and Internet Services
99449	NTRPROF PHONE/NTRNET/EHR ASSMT&MGMT 31/> MIN	Primary Care	Telephone and Internet Services
99451	NTRPROF PHONE/NTRNET/EHR ASSMT&MGMT 5/> MIN	Primary Care	Telephone and Internet Services
99452	NTRPROF PHONE/NTRNET/EHR REFERRAL SVC 30 MIN	Primary Care	Telephone and Internet Services
98966	NONPHYSICIAN TELEPHONE ASSESSMENT 5-10 MIN	Primary Care	Telephone and Internet Services
98967	NONPHYSICIAN TELEPHONE ASSESSMENT 11-20 MIN	Primary Care	Telephone and Internet Services
98968	NONPHYSICIAN TELEPHONE ASSESSMENT 21-30 MIN	Primary Care	Telephone and Internet Services
98969	NONPHYSICIAN ONLINE ASSESSMENT AND MANAGEMENT	Primary Care	Telephone and Internet Services
90460	IM ADM THRU 18YR ANY RTE 1ST/ONLY COMPT VAC/TOX	Primary Care	Immunization Administration for Vaccines/Toxoids
90461	IM ADM THRU 18YR ANY RTE ADDL VAC/TOX COMPT	Primary Care	Immunization Administration for Vaccines/Toxoids
90471	IM ADM PRQ ID SUBQ/IM NJXS 1 VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
90472	IM ADM PRQ ID SUBQ/IM NJXS EA VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
90473	IM ADM INTRANSL/ORAL 1 VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
90474	IM ADM INTRANSL/ORAL EA VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
G0008	ADMINISTRATION OF INFLUENZA VIRUS VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
G0009	ADMINISTRATION OF PNEUMOCOCCAL VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
G0010	ADMINISTRATION OF HEPATITIS B VACCINE	Primary Care	Immunization Administration for Vaccines/Toxoids
96160	PT-FOCUSED HLTH RISK ASSMT SCORE DOC STND INSTRM	Primary Care	Health Risk Assessment, Screenings, and Counseling
96161	CAREGIVER HLTH RISK ASSMT SCORE DOC STND INSTRM	Primary Care	Health Risk Assessment, Screenings, and Counseling
99078	PHYS/QHP EDUCATION SVCS RENDERED PTS GRP SETTING	Primary Care	Health Risk Assessment, Screenings, and Counseling
99483	ASSMT & CARE PLANNING PT W/COGNITIVE IMPAIRMENT	Primary Care	Health Risk Assessment, Screenings, and Counseling
G0396	ALCOHOL &/SUBSTANCE ABUSE ASSESSMENT 15-30 MIN	Primary Care	Health Risk Assessment, Screenings, and Counseling
G0397	ALCOHOL &/SUBSTANCE ABUSE ASSESSMENT >30 MIN	Primary Care	Health Risk Assessment, Screenings, and Counseling
G0442	ANNUAL ALCOHOL MISUSE SCREENING 15 MINUTES	Primary Care	Health Risk Assessment, Screenings, and Counseling
G0443	BRIEF FACE-FACE BEHAV CNSL ALCOHL MISUSE 15 MIN	Primary Care	Health Risk Assessment, Screenings, and Counseling
G0444	ANNUAL DEPRESSION SCREENING 15 MINUTES	Primary Care	Health Risk Assessment, Screenings, and Counseling

Procedure Code	Description	Primary Care or OB/GYN	Reporting Procedure Category
G0505	COGN & FUNCT ASMT USING STD INST OFF/OTH OP/HOME	Primary Care	Health Risk Assessment, Screenings, and Counseling
99173	SCREENING TEST VISUAL ACUITY QUANTITATIVE BILAT	Primary Care	Preventive Medicine Services
G0102	PROS CANCER SCREENING; DIGTL RECTAL EXAMINATION	Primary Care	Preventive Medicine Services
G0436	SMOKE TOB CESSATION CNSL AS PT; INTRMED 3-10 MIN	Primary Care	Preventive Medicine Services
G0437	SMOKING & TOB CESS CNSL AS PT; INTENSIVE >10 MIN	Primary Care	Preventive Medicine Services
58300	Insertion of IUD	OB/GYN	Contraceptive Insertion/Removal
58301	Removal of IUD	OB/GYN	Contraceptive Insertion/Removal
57170	Diaphragm or cervical cap fitting with instructions	OB/GYN	Contraceptive Insertion/Removal
S4981	Insertion of levonorgestrel- releasing intrauterine system	OB/GYN	Contraceptive Insertion/Removal
11981	Insertion, non- biodegradable drug delivery implant	OB/GYN	Contraceptive Insertion/Removal
11982	Removal, non- biodegradable drug delivery implant	OB/GYN	Contraceptive Insertion/Removal
11983	Removal with reinsertion, non- biodegradable drug delivery implant	OB/GYN	Contraceptive Insertion/Removal
99460	1ST HOSP/BIRTHING CENTER CARE PER DAY NML NB	OB/GYN	Newborn Care Services
99461	1ST CARE PR DAY NML NB XCPT HOSP/BIRTHING CENTER	OB/GYN	Newborn Care Services
99462	SUBQ HOSPITAL CARE PER DAY E/M NORMAL NEWBORN	OB/GYN	Newborn Care Services
99463	1ST HOSP/BIRTHING CENTER NB ADMIT & DSCHG SM DAT	OB/GYN	Newborn Care Services
99464	ATTN AT DELIVERY 1ST STABILIZATION OF NEWBORN	OB/GYN	Delivery, Antepartum & Postpartum Care Services
99465	DELIVERY/BIRTHING ROOM RESUSCITATION	OB/GYN	Delivery, Antepartum & Postpartum Care Services
S0610	ANNUAL GYNECOLOGICAL EXAM, ESTABLISHED PATIENT	OB/GYN	Gynecological Services
S0612	ANNUAL GYNECOLOGICAL EXAM, NEW PATIENT	OB/GYN	Gynecological Services
S0613	ANNUAL GYNECOLOGICAL EXAM, BREAST EXAM W/O PELVIC	OB/GYN	Gynecological Services
G0101	CERV/VAGINAL CANCER SCR; PELV&CLIN BREAST EXAM	OB/GYN	Gynecological Services
Q0091	SCREEN PAP SMEAR; OBTAIN PREP &C ONVEY TO LAB	OB/GYN	Gynecological Services
59400	OB CARE ANTEPARTUM VAG DLVR & POSTPARTUM	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59410	VAGINAL DELIVERY ONLY W/POSTPARTUM CARE	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59425	ANTEPARTUM CARE ONLY 4-6 VISITS	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59426	ANTEPARTUM CARE ONLY 7/> VISITS	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59430	POSTPARTUM CARE ONLY SEPARATE PROCEDURE	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59510	OB ANTEPARTUM CARE CESAREAN DLVR & POSTPARTUM	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59515	CESAREAN DELIVERY ONLY W/POSTPARTUM CARE	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59610	ROUTINE OB CARE VAG DLVRY & POSTPARTUM CARE VB	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59614	VAGINAL DELIVERY & POSTPARTUM CARE VBAC	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59618	ROUTINE OBSTETRICAL CARE ATTEMPTED VBAC	OB/GYN	Delivery, Antepartum & Postpartum Care Services
59622	CESAREAN DLVRY & POSTPARTUM CARE ATTEMPTED VBA	OB/GYN	Delivery, Antepartum & Postpartum Care Services

Appendix 6. Non-Claims Based Payments – Reporting Template July 2020 for Commercial, Medicaid Managed Care, and Medicare Advantage Data

Non-Claims Based Payment Categories	Definition and Examples		Total Non-Claims Based Payments	Total Population Count upon which Payments are Based		Non-Claims Primary Care Payments	Primary Care Population Count upon which Payments are Based	
				Distinct Members	Member Months		Distinct Members	Member Months
Payments for Capitated Services								
1. Capitated or Salaried Expenditures		Capitation and/or salaried arrangements with primary care providers or other providers not billed or captured through claims. A fixed payment for each person the provider provides care for.						
Other Types of Non-Claims Payments								
2. Risk-Based Reconciliation		Risk-based payments to primary care providers or practices that are not billed or otherwise captured through claims. Example: Year-end reconciled PMPM payments/penalties (upside or downside) made to the billing provider based on performance relative to contracted measure targets, e.g. wellness visit rate, flu shot compliance, or chronic care gap closure.						
3. Patient-Centered Primary Care Homes/ Medical Homes (PCPCH/PCMH)		Practice-level payments such as payments to Patient-Centered Primary Care Homes (PCMH), Health Homes for provision of comprehensive primary care services; payments based upon PCMH recognition; or payments for participation in proprietary or other multi-payer medical -home or specialty care practice initiatives.						

Non-Claims Based Payment Categories	Definition and Examples		Total Non-Claims Based Payments	Total Population Count upon which Payments are Based		Non-Claims Primary Care Payments	Primary Care Population Count upon which Payments are Based	
				Distinct Members	Member Months		Distinct Members	Member Months
		Example: A per-member-per month payment based on a practice's PCMH tier level.						
4. Provider Incentives		Example: Bonus payments to a provider for meeting predetermined baseline or target of medical service use, such as a specified vaccination rule.						
	a. Retrospective performance-based payments	Retrospective incentive payments to primary care providers or practices based on performance aimed at decreasing cost or improving value for a defined population.						
	b. Prospective performance-based payments	Prospective incentive payments to primary care providers or practices aimed at developing capacity for improving care for a defined population of patients.						
5. Health Information Technology (HIT) Structural Changes		Payments for Health Information Technology structural changes at a primary care practice such as electronic records and data reporting capacity from those records						
6. Workforce Expenditures		Payments or expenses for supplemental staff or supplemental activities integrated into the primary care practice (i.e., practice coaches, patient educators, patient navigators, nurse care managers, etc.)						
7. Other Expenditures		Please include and describe any other non-claims-based expenditures you currently incur to						

Non-Claims Based Payment Categories	Definition and Examples		Total Non-Claims Based Payments	Total Population Count upon which Payments are Based		Non-Claims Primary Care Payments	Primary Care Population Count upon which Payments are Based	
				Distinct Members	Member Months		Distinct Members	Member Months
		support primary care providers or practices (e.g. investments in loan forgiveness for training providers, flu clinics, rewards for provider reporting, or workforce expenditures for supplemental staff/activities integrated into the practice such as practice coaches/patient educators/patient navigators/nurse care managers):						
8. Other Expenditures Not Paid Directly to Primary Care Practices		Please include and describe any other non-claims-based expenditures you incur as an insurer to support members in accessing primary care that are not paid to primary care practices (e.g. technical assistance to practices, home visits, mobile fairs, member incentives, direct-to-consumer primary care telehealth services):						
Total	Even if your organization is not able to report break-outs by the non-claims expenditure categories above, please provide total non-claims paid dollars for each major plan type covered by your organization (columns D - X) and include an estimate of the percentage for each of the non-claims expenditure categories (Column A).							

Appendix 7. Comparison of NESCSO Primary Care Payments to Other Published Studies

The Patient-Centered Primary Care Collaborative report, "Investing in Primary Care: A State-Level Analysis" (July 2019), is based on the Medical Expenditure Panel Survey (MEPS) and provides percentage of primary care for both narrow and broad definitions by payer types for 29 of 50 states. The report is available here: https://www.pcpcc.org/resource/investing-primary-care-state-level-analysis.

While there has been a sustained regional commitment to advancing primary care, there has been variation in the approaches to evaluating payments and impact, limiting the ability for the NESCSO states to objectively compare and learn from each other as well as from other states.

The methodology used for each study varies by the payer mix, the provider and procedure types included, the use of pharmacy in the denominator, the use of non-claims payments, and the lack of detail regarding the methods used in some cases. Examples of variation include:

- Report primary care payments (e.g., Maine, Oregon, Rhode Island, Vermont, Washington)
- Set targets for growth in primary care payments (e.g., Connecticut, Rhode Island)
- Use a distributed model in which payers supply results (e.g., Milbank-Bailit, Rhode Island) vs. use APCD claims sources (e.g., Maine, Oregon, Vermont, Washington)
- Include Commercial payers only (e.g., Milbank-Bailit, Rhode Island)
- Capture non-claims payments and payments (e.g., Oregon, Rhode Island, Vermont)
- Utilize a range of narrow and broad definition(s) of primary care payments (e.g., Milbank-Bailit, RAND, Maine, Oregon, Vermont, Washington)
- Use allowed amount on claims (e.g., Milbank-Bailit, RAND, Vermont, Washington) vs. plan paid only (e.g., Maine, Oregon)
- Include pharmacy in the denominator (Milbank-Bailit, RAND, Washington) vs. exclude (e.g., Maine, Oregon, Vermont)

The NESCSO study was intended to address the variation from these previous studies and to establish an aligned, regional baseline to understand the current state and to guide future work. All previous studies have varied in their definitions of primary care provider taxonomy codes and primary care service procedure codes. Variances in provider selection have included which subspecialties of family medicine, internal medicine, pediatrics, and nurse providers should be included or excluded and whether OB/GYNs, behavioral health providers, naturopaths, homeopaths, nurse practitioners, physician assistants, and midwives should be included. While certain services were commonly included across all studies (e.g., office visits, preventive visits, consultations), other services were not included in all studies (e.g., nursing facility visits, home health visits, care management, prolonged services, screenings and assessments, immunization administration, telehealth visits, preventive medicine).

The Milbank-Bailit study influenced other subsequent studies to create both a broad and a narrow definition. While the 2019 Oregon study, "Primary Care Spending in Oregon: A Report to the Oregon Legislature" (https://www.oregon.gov/oha/HPA/ANALYTICS/PCSpendingDocs/2019-Oregon-Primary-

Care-Spending-Report-Legislature.pdf) was a starting point for several other studies, most subsequent studies modified their definitions of primary care. It should be noted that there are at least two important considerations for this NESCSO study:

1. Some studies have included retail pharmacy payments in the denominator, which results in a lower percentage of primary care compared to studies that exclude retail pharmacy.
2. Some studies have included primary-care, non-claims payments, which results in a higher percentage of primary care compared to studies that do not include or have this data available.

! *Previous studies received intensive review and informed decisions about the methods for this NESCSO study. The NESCSO study methods do not replicate exactly any previous study and are particularly designed to support a comparative state level evaluation that can be used to inform decision making and monitoring of policies related to primary care payments.*

The table below compares results for NESCSO Definition #1 (Defined PCPs, Selected Services) and Definition #2 (Defined PCPs, All Services), with results for the narrowest and broadest definition of primary care payments from other representative studies. It is important to note that these studies have varied regarding their methods, with some of the major differences highlighted (e.g., inclusion of pharmacy, state or payer differences, claims or survey data, etc.).

For Commercial Definition #1 (Defined PCPs, Selected Services), the degree of variation between the highest and lowest primary care percentage of payments for NESCSO (1.6-fold) was similar to the PCPCC study (1.7-fold) and Milbank-Bailit PPO (1.7-fold), and lower than Oregon (2.5-fold) and Milbank-Bailit HMO (4.0-fold). The NESCSO Definition #1 rates for Medicare Advantage, Medicare FFS, and Medicaid also showed similar variability or lower variability compared to other studies.

NESCSO results by payer type for Definition #2 (Defined PCPs, All Services) also were like other studies, and the range of variability was either lower in the NESCSO study or comparable to the other studies. For Medicaid, the NESCSO Definition #2 variability was 1.5-fold – lower than the PCPCC study (4.2-fold) variation. These results illustrate that NESCSO rates were like other published studies, and the range of variability between the NESCSO states was lower or similar to other studies.

Primary Care Percentage of Total Medical Payments, 2018 – NESCSO Definition #1 (Defined PCPs, Selected Services) Compared to the Narrowest Definition from Other Studies & NESCSO Definition #2 (Defined PCPs, All Services) Compared to the Broadest Definition from Other Studies *

Payer Type	Narrowest (Definition 1) % & Range	Ratio of Highest % to Lowest % – Narrowest (Definition 1)	Broadest (Definition 2) % & Range)	Ratio of Highest % to Lowest % – Broadest (Definition 2)	Notes
All Payers					
NESCSO	5.5	N/A	8.2	N/A	Pharmacy not included
PCPCC Study U.S. Population	5.6 (3.5–7.6)	2.2x	10.2 (8.2–14.0)	1.7x	State variation; 2011– 2016 MEPS survey data
Maine	5.5	N/A	8.6	N/A	Pharmacy not included
Vermont	5.9	N/A	8.9	N/A	Pharmacy not included
Commercial					
NESCSO	6.1 (4.9–8.0)	1.6x	9.3 (7.4–11.0)	1.5x	State variation; pharmacy not included
PCPCC Study Private Insurance	6.0 (4.6–7.8)	1.7x	10.2 (7.5–13.8)	1.8x	State variation; 2011–2016 MEPS survey data
Maine	5.7	N/A	10.5	N/A	Pharmacy not included
Vermont	5.4	N/A	8.1	N/A	Pharmacy not included
Milbank-Bailit – HMO	4.8 (3.1–12.5)	4.0x	7.6 (1.8–6.6)	3.7x	Payer variation; pharmacy included
Milbank-Bailit – PPO	4.6 (3.4–5.8)	1.7x	7.1 (4.9–11.0)	2.2x	Payer variation; pharmacy included
Oregon	13.4 (6.7–16.9)	2.5x	N/A	N/A	Payer variation; pharmacy not included
Washington	4.5	N/A	5.7	N/A	Pharmacy included; all results restricted on procedure codes
Medicare					
NESCSO Medicare Advantage	5.5 (4.7–6.1)	1.3x	8.4 (7.1–10.7)	1.5x	State variation; pharmacy not included
NESCSO Medicare FFS	3.4 (2.8–4.2)	1.5x	5.4 (4.5–6.4)	1.4x	State variation; pharmacy not included
PCPCC Study Medicare	4.4 (2.1–6.9)	3.3x	6.9 (3.9–10.1)	2.6x	State variation; 2011–2016 MEPS survey data
Maine Medicare	4.7	N/A	7.1	N/A	Pharmacy not included
Vermont Medicare FFS	4.4	N/A	5.5	N/A	Pharmacy not included

Payer Type	Narrowest (Definition 1) % & Range	Ratio of Highest % to Lowest % – Narrowest (Definition 1)	Broadest (Definition 2) % & Range)	Ratio of Highest % to Lowest % – Broadest (Definition 2)	Notes
RAND U.S. Medicare FFS	2.1 (1.6–3.2)	2.0x	4.9 (2.9–4.7)	1.6x	State variation; pharmacy included
Oregon Medicare Advantage	10.6 (4.1–23.3)	5.7x	N/A	N/A	Payer variation; pharmacy not included
Washington Medicare Advantage	3.4	N/A	3.9	N/A	Pharmacy included; all results restricted on procedure codes
Medicaid					
NESCSO Medicaid	8.0 (5.4–10.1)	1.9x	10.4 (8.3–12.4)	1.5x	State variation; pharmacy not included
PCPCC Study Medicaid	6.0 (3.8–10.7)	2.8x	11.2 (6.1–25.7)	4.2x	State variation; 2011–2016 MEPS survey data
Maine Medicaid	6.8	N/A	9.6	N/A	Pharmacy not included
Vermont Medicaid	12.3	N/A	24.3	N/A	Pharmacy not included
Oregon Medicaid Managed Care	16.5 (9.2–23.8)	2.6x	N/A	N/A	Payer variation; pharmacy not included
Washington Medicaid Managed Care	5.1	N/A	6.8	N/A	Pharmacy included; all results restricted on procedure codes

* Massachusetts data: Commercial (2017), Medicaid (2016), Medicare (N/A); Connecticut's Medicaid APCD data was not sufficiently complete for inclusion in the analysis.

Links to the studies referenced in the table above follow:

Maine State Study
Public Law, Chapter 244, 2020 Annual Report: Primary Care Spending in State of Maine. 2018 data. January 2020.
https://mhdo.maine.gov/_mqfdocs/MQF%20Primary%20Care%20Spending%20Report__Jan%202020.pdf

Milbank-Bailit Study
Standardizing the Measurement of Commercial Health Plan Primary Care Spending. 2014 data. July 2017.
https://www.milbank.org/publications/standardizing-measurement-commercial-health-plan-primary-care-spending/

Oregon State Study
Primary Care Spending in Oregon: A Report to the Legislature. 2017 data. February 2019.
https://www.oregon.gov/oha/HPA/ANALYTICS/PCSpendingDocs/2019-Oregon-Primary-Care-Spending-Report-Legislature.pdf

PCPCC Study
Investing in Primary Care: A State-Level Analysis. Patient-Centered Primary Care Collaborative, Robert Graham Center. Supported by Milbank Memorial Fund. 2011–2016 survey data. July 2019. https://www.pcpcc.org/sites/default/files/resources/pcmh_evidence_report_2019_0.pdf

RAND Study
Medicare Primary Care Spending in the Fee-for-Service Medicare Population. JAMA Inter Med. 2019. 2015 data. April 2019. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6583869

Vermont State Study
Report to the Vermont Legislature. Defining Primary Care and Determining Primary Care's Proportion of Health Care Spending in Vermont. In Accordance with Sec. 2 of Act 17 (2019): An act relating to determining the proportion of health care spending allocated to primary care. Vermont Green Mountain Care Board & Vermont Department of Health Access. 2018 data. January 2020.
https://legislature.vermont.gov/assets/Legislative-Reports/Act-17-Primary-Care-Spend-Report-15-January-2020_Final.pdf

Washington State Study
Primary Care Expenditures: Summary of Current Primary Care Expenditures and Investments in Washington. Washington State Office of Financial Management. 2018 data. December 2019.
https://www.ofm.wa.gov/sites/default/files/public/publications/PrimaryCareExpendituresReport.pdf

NESCSO Study in the Context of Other Initiatives

Nationally, there are numerous efforts to support primary care, increase payment in primary care, and measure the impact of primary care payment and transformation. These efforts have established the readiness to use NESCSO and the preceding studies for policy decisions.

The Patient-Centered Primary Care Collaborative has been working to promote primary care transformation and track legislation and other efforts by state:

- https://www.pcpcc.org/about
- https://www.pcpcc.org/legislation
- https://www.pcpcc.org/sites/default/files/resources/pcmh_evidence_report_2019_0.pdf

Tracking and promoting primary care transformation are focus areas for the Milbank Memorial Fund, and the organization is tracking efforts in each state:

- https://www.milbank.org/focus-areas/primary-care-transformation/
- https://www.milbank.org/focus-areas/primary-care-transformation/other-resources/

The CMS Innovation Center has worked to restructure payment models and incentives for primary care and to advance transformation through multi-payer demonstration programs including the Multi-Payer Advanced Primary Care Program (MAPCP), Comprehensive Primary Care (CPC), Comprehensive Primary Care Plus (CPC+), and the newest model, Primary Care First PCF). Several New England states have participated in these models, advancing a regional focus and culture for increasing payment in primary care:

- https://innovation.cms.gov/innovation-models/comprehensive-primary-care-initiative
- https://innovation.cms.gov/innovation-models/comprehensive-primary-care-plus
- https://innovation.cms.gov/innovation-models/primary-care-first-model-options

The regional commitment to strengthening primary care is further demonstrated through the enactment of legislation and regulations that support primary care and with published studies measuring primary care as a percentage of total healthcare expenditures. These efforts include the following:

- Connecticut's governor issued a January 2020 executive order that set a target for primary care expenditures of 10% of total healthcare expenditures by 2025.
  https://portal.ct.gov/OHS/Content/Cost-Growth-Benchmark
- Maine enacted legislation in 2019 to analyze primary care payments and completed a report in January 2020.
  https://mhdo.maine.gov/_mqfdocs/MQF%20Primary%20Care%20Spending%20Report__Jan%202020.pdf

- The governor of Massachusetts proposed legislation to support primary care, and the Massachusetts Center for Health Information and Analysis (CHIA) has drafted specifications to report primary care and behavioral healthcare payments.
  https://malegislature.gov/Bills/191/H4134.html
- New Hampshire enacted legislation to create a legislative commission, the Primary Care Workforce, and renewed legislation in July 2020. Established in 2010 under NH Title X Public Health Chapter T-126:1, the Legislative Commission on the Interdisciplinary Primary Care Workforce was renewed via NH SB 567 on July 17, 2020.
  http://www.gencourt.state.nh.us/rsa/html/x/126-t/126-t-mrg.htm
  https://legiscan.com/NH/text/SB567/id/2082900
- The Rhode Island Office of the Health Insurance Commissioner established affordability standards to improve primary care within the state by requiring insurers to invest more in primary care providers and services, setting initial targets of a 1 percent increase each year. Three Commercial insurers self-report primary care payments as a percentage of total healthcare expenditures.
  http://www.ohic.ri.gov/ohic-reformandpolicy-affordability.php

- Vermont enacted legislation in 2019 requesting an analysis and completed a report in January 2020.
  https://legislature.vermont.gov/assets/Legislative-Reports/Act-17-Primary-Care-Spend-Report-15-January-2020_Final.pdf

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