



Cost and Utilization of Treatment for Diabetes in New Hampshire: Analysis of Medical and Pharmacy All-Payer Claims Data

Overview of the Burden of Diabetes

Diabetes is the nation's seventh leading cause of death. The *National Diabetes Statistics Report, 2020* estimates that 34.2 million Americans of all ages have diabetes. This is approximately 10.5% of the entire United States population. More specifically, 34.1 million adults aged 18 years or older have diabetes. This is approximately 13% of all adults in the United States. The report also found that newer cases were identified more frequently in non-Hispanic blacks and people of Hispanic origin rather than non-Hispanic Asians and non-Hispanic whites¹. In New Hampshire, 10.3% of adults had diabetes in 2019². Diabetes is becoming one of the most expensive chronic diseases in the nation, costing the United States \$327 billion in 2017³. Based on the estimated national cost of diabetes, \$237 billion (about 73%) represents direct health care expenditures attributed to diabetes, whereas \$90 billion (about 27%) represents lost productivity³. The excess costs associated with medications represents 43% of total direct medical burden – \$15 billion for insulin, \$15.9 billion for other anti-diabetes agents, and \$71.2 billion in prescription medication use attributed to comorbidities frequently associated with diabetes³. Before rebates or discounts, insulin accounts for \$48 billion, or about 20% of the direct costs in treating diabetes. The average listing price of insulin, between the years 2001 to 2018, has increased 11% annually⁴.

¹ Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2020. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services; 2020. Retrieved October 29, 2020 from <https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf>

² America's Health Rankings. Diabetes in NH Annual Report. United Health Foundation, Retrieved October 29, 2020, from <https://www.americashealthrankings.org/explore/annual/measure/Diabetes/state/NH?edition-year=2019>

³ American Diabetes Association. Economic Costs of Diabetes in the U.S. in 2017. (2018, March). *Diabetes Care*, 41(5), 917-928. doi: 10.2337/dci18-0007.

⁴ Hayes, T. O., & Farmer, J. (2020, April 02). Insulin Cost and Pricing Trends. Retrieved October 29, 2020, from <https://www.americanactionforum.org/research/insulin-cost-and-pricing-trends/>



Overview of NH Claims Analysis

This report includes data and visualizations from the NH Claims Report Suite (<https://chhs.unh.edu/institute-health-policy-practice/focal-areas/health-analytics-informatics>) that describe medical and pharmaceutical costs for diabetes in NH's commercial, Medicaid, and Medicare populations. Pharmacy and medical costs are estimated separately throughout this report.

The regulations that establish the NH Comprehensive Healthcare Information System (NH CHIS) (<https://nhchis.com/>) require that commercial insurers submit claims and enrollment data to the NH Department of Health and Human Services on a monthly basis. Some NH licensed insurers fall below the threshold of 10,000 covered lives and are not required to submit data to NH CHIS, and therefore are not included in this analysis. Based on availability and quality of the data, the analysis for this report is limited to the top commercial medical insurers (Cigna, Anthem, Harvard Pilgrim, Tufts, Health Plans Inc., Matthew Thornton, and Tufts Health Freedom) and the top commercial pharmacy insurers (Harvard Pilgrim, Tufts, Tufts Health Freedom, Caremark, Matthew Thornton, and Express Scripts). These insurers contribute more than 80% of the commercial medical and pharmacy claims data in a typical year.⁵

NH Medicaid data is limited to enrollment and claims from the Medicaid managed care organizations (NH Healthy Families, Well Sense and AmeriHealth) and Medicaid Fee-For-Service. Premium Assistance Plan (i.e. the Medicaid Expansion program) enrollment and claims data are not included.

The NH Medicare medical data includes members who are enrolled in both Medicare Parts A and B. The NH Medicare pharmacy data includes members who are enrolled in Medicare Part D. Medicare Advantage plans are not included in the analysis.

⁵ In March 2016, the Supreme Court ruled that Liberty Mutual, as a self-insured employer, can choose not to submit their health claims data to Vermont's all-payer claims database. This decision resulted in many commercial insurers opting not to submit the self-insured business to the NH CHIS. Therefore, please use caution in interpreting analysis/measures derived from data after March 2016, because there are fewer employer plans submitting data after March 2016. For information about the Supreme Court decision, please see https://www.supremecourt.gov/opinions/15pdf/14-181_5426.pdf.



A summary of the number of covered lives by data source and analytic period is presented in Table 1.

Table 1: Number of Covered Lives for Commercial, Medicaid and Medicare by Claims Type and Analytic Period

Data Source	Claims Type	Population Age Range	Previous Analytic Period	Current Analytic Period	Covered Lives Previous Period	Covered Lives Current Period
Commercial CHIS	Medical	0-64	7/1/2017 to 6/30/2018	7/1/2018 to 6/30/2019	569,556	550,195
	Pharmacy	0-64	7/1/2017 to 6/30/2018	7/1/2018 to 6/30/2019	773,118	793,245
Medicaid	Medical	0-64	1/1/2018 to 12/31/2018	1/1/2019 to 12/31/2019	191,098	217,995
	Pharmacy	0-64	1/1/2018 to 12/31/2018	1/1/2019 to 12/31/2019	191,098	217,995
Medicare	Medical	All ages	1/1/2017 to 12/31/2017	1/1/2018 to 12/31/2018	233,982	234,510
	Pharmacy	All ages	1/1/2017 to 12/31/2017	1/1/2018 to 12/31/2018	196,960	205,500

For more information about data included in this analysis, please see Appendix A. The analytic periods vary among commercial, Medicaid, and Medicare data because the data is received on different schedules from the various data sources. For more information about additional data and reports available in the NH Claims Report Suite: <https://chhs.unh.edu/institute-health-policy-practice/focal-areas/health-analytics-informatics>.



Percent of Insured Population Impacted by Diabetes

The “percentage of member months” can be used as a proxy for understanding the percentage of the insured population that has received treatment for a disease or condition. The use of “member months” accounts for the incomplete years of coverage for individual members. For the purposes of this analysis, the top 20 conditions by member months are presented in Tables 2-4 to allow for comparison of diabetes and related conditions. The conditions are associated to an Episode Treatment Group (ETG) as defined by OPTUMInsight’s Symmetry Episode Treatment Groups®. Note: The lists of ETGs presented in this report include conditions, as well as service categories that are not associated with a specific clinical condition (e.g. “routine exam”).

For the purpose of this report, the following conditions are highlighted in the tables below: Congestive Health Failure (CHF), Diabetes, Hypertension, and Cardiovascular Disease (CVD).



NH Commercial

While hypertension ranks second in this list, it is the highest ranked *clinical* condition with 15.30% of the total member months in the NH commercial population included in the NH CHIS analysis in FY 2018 (Table 2). Diabetes is ranked 16th with 6.57% of total member months in the NH commercial population in FY 2018. CVD and CHF were not in the top 20 list of conditions in terms of the percentage of total member months, with these conditions ranking 43rd (2.49%) and 113th (.99%) respectively.

Table 2: Top 20 Episode Treatment Groups Ranked by Percent of Member Months from July 1, 2018 to June 30, 2019 for the NH Commercial Data

	Episode Treatment Group (ETG)	% of Member Months with Condition 7/1/2017 to 6/30/2018	% of Member Months with Condition 7/1/2018 to 6/30/2019
1	Routine exam	41.35%	42.84%
2	Hypertension	15.25%	15.30%
3	Screenings & immunizations incidental to other services - immunizations	11.45%	12.36%
4	Non-routine inoculation	8.67%	9.79%
5	Visual disturbances	7.99%	8.07%
6	Non-malignant neoplasm of skin	7.54%	8.02%
7	Tonsillitis, adenoiditis or pharyngitis	7.77%	7.99%
8	Mood disorder, depressed	7.16%	7.34%
9	Other inflammation of skin	6.86%	7.13%
10	Isolated signs, symptoms & non-specific diagnoses or conditions	6.98%	7.09%
11	Other disorders of ear/nose/throat	6.65%	7.03%
12	Joint degeneration, localized - back	6.90%	6.82%
13	Obesity	6.54%	6.81%
14	Conditional exam	6.21%	6.76%
15	Anxiety disorder or phobias	6.27%	6.59%
16	Diabetes	6.62%	6.57%
17	Cataract	6.48%	6.28%
18	Hyperlipidemia, other	5.86%	5.92%
19	Screenings & immunizations incidental to other services - mammogram	5.58%	5.63%
20	Hypo-functioning thyroid gland	5.20%	5.27%



NH Medicaid

Hypertension ranks eighteenth with 5.61% of member months with hypertension in the NH Medicaid population in 2019 (Table 3). Diabetes is not in the top 20 list of conditions in terms of the percentage of total member months with diabetes in the NH Medicaid population; it ranks 26th with 3.46% of the member months with diabetes. Likewise, CVD and CHF were also not in the top 20 list of conditions, ranking 38th (2.42%) and 149th (.56%) respectively.

Table 3: Top 20 Episode Treatment Groups Ranked by Percent of Member Months from January 1, 2019 to December 31, 2019 for the NH Medicaid Population

	Episode Treatment Group (ETG)	% of Member Months with Condition 1/1/2018 to 12/31/2018	% of Member Months with Condition 1/1/2019 to 12/31/2019
1	Routine exam	46.71%	43.48%
2	Tonsillitis, adenoiditis or pharyngitis	15.12%	13.40%
3	Visual disturbances	13.41%	12.39%
4	Mood disorder, depressed	9.60%	10.44%
5	Non-routine inoculation	8.73%	9.81%
6	Otitis media	10.37%	8.64%
7	Isolated signs, symptoms & non-specific diagnoses or conditions	7.35%	7.49%
8	Other drug dependence	6.30%	7.44%
9	Other neuropsychological or behavioral disorders	7.82%	7.28%
10	Asthma	8.00%	7.25%
11	Development disorder	9.69%	6.98%
12	Anxiety disorder or phobias	6.05%	6.76%
13	Otolaryngology diseases signs & symptoms	7.35%	6.56%
14	Screenings & immunizations incidental to other services - immunizations	6.77%	6.48%
15	Gastroenterology diseases signs & symptoms	5.79%	6.09%
16	Other inflammation of skin	6.13%	5.94%
17	Opioid or barbiturate dependence	4.54%	5.64%
18	Hypertension	4.66%	5.61%
19	Obesity	5.11%	5.38%
20	Attention deficit disorder	5.88%	5.37%



NH Medicare

Hypertension ranks first with 46.45% of the total member months with hypertension in the NH Medicare population in 2018 (Table 4). Diabetes is ranked 6th with 20.98% of total member months with diabetes in the NH commercial population in 2018. CVD and CHF were not in the top 20 list of conditions in terms of the percentage of total member months, with these conditions ranked 74th (2.41%) and 30th (6.63%) respectively.

Table 4: Top 20 Episode Treatment Groups Ranked by Percent of Member Months from January 1, 2018 to December 31, 2018 for the NH Medicare Population

	Episode Treatment Group (ETG)	% of Member Months with Condition 1/1/2017 to 12/31/2017	% of Member Months with Condition 1/1/2018 to 12/31/2018
1	Hypertension	46.39%	46.45%
2	Screenings & immunizations incidental to other services - immunizations	32.57%	33.74%
3	Routine exam	26.24%	28.01%
4	Cataract	27.90%	27.55%
5	Hyperlipidemia, other	22.75%	22.44%
6	Diabetes	21.36%	20.98%
7	Joint degeneration, localized - back	16.94%	16.36%
8	Hypo-functioning thyroid gland	14.64%	14.74%
9	Ischemic heart disease	14.75%	14.65%
10	Non-routine inoculation	15.27%	14.42%
11	Conditional exam	12.62%	13.34%
12	Non-malignant neoplasm of skin	12.21%	13.19%
13	Obesity	12.95%	12.88%
14	Other disorders of ear/nose/throat	12.10%	12.34%
15	Glaucoma	11.59%	11.69%
16	Joint degeneration, localized - knee & lower leg	11.17%	11.20%
17	Screenings & immunizations incidental to other services - mammogram	11.57%	10.80%
18	Chronic obstructive pulmonary disease	11.36%	10.69%
19	Mood disorder, depressed	10.88%	10.68%
20	Malignant neoplasm of skin, major	10.05%	9.56%



Medical Costs for Diabetes and Selected Chronic Conditions

The total medical cost for members who have one or more selected chronic conditions (Asthma, Congestive Heart Failure, Chronic Obstructive Pulmonary Disease, Diabetes, Hypertension, Cardiovascular Disease, Mood Disorder-Depressed, Mood Disorder-Bipolar, and Anxiety Disorder/Phobia)⁶ is presented for NH commercial, Medicaid, and Medicare populations during the periods of FY 2017 and FY 2018. Pharmaceutical costs are not included in the estimates of medical costs for these conditions.

⁶ Note: OPTUMInsight's Symmetry Episode Treatment Groups® (ETGs®) was used to identify the following representative chronic conditions in the report: Asthma, Congestive Heart Failure, Chronic Obstructive Pulmonary Disease, Diabetes, Hypertension, Cardiovascular Disease, Mood Disorder-Depressed, Mood Disorder-Bipolar and Anxiety Disorder/Phobia. Please see OPTUMInsight for additional information on ETGs®. "Comorbidity" refers to comorbidity with Asthma, Congestive Heart Failure, Chronic Obstructive Pulmonary Disease, Diabetes, Hypertension, Cardiovascular Disease, Mood Disorder-Depressed, Mood Disorder-Bipolar or Anxiety Disorder/Phobia.



NH Commercial

In the commercial population included in the NH CHIS data analysis, the medical costs for members with diabetes grew slightly between FY 2017 and FY 2018 from \$273.3 million to \$283.1 million, respectively (see Table 5). In both FY 2017 and FY 2018, a large proportion of all costs for members with diabetes was for members with diabetes and a co-morbidity (\$250.4M and \$259.0M respectively).

In comparison with other chronic conditions, the costs for treatment of diabetes are greater than the current period costs for CVD (\$186.2M) and CHF (\$109.3M). The medical costs of hypertension are almost three times that of costs for members with diabetes.

Table 5: Medical Cost for Diabetes, Hypertension, CVD, and CHF by Comorbidity Status for the NH Commercial Data

Chronic Condition	Comorbidity Indication Level	Medical Cost (allowed) 7/1/2017 to 6/30/2018 in Millions	Medical Cost (allowed) 7/1/2018 to 6/30/2019 in Millions
Diabetes	All	\$273.3M	\$283.1M
Diabetes	Without Comorbidity	\$22.8M	\$24.1M
Diabetes	With Comorbidity	\$250.4M	\$259.0M
Hypertension	All	\$719.2M	\$738.3M
Hypertension	Without Comorbidity	\$183.0M	\$187.1M
Hypertension	With Comorbidity	\$536.3M	\$551.2M
CVD (Cardiovascular Disease)	All	\$177.9M	\$186.2M
CVD (Cardiovascular Disease)	Without Comorbidity	\$8.7M	\$10.0M
CVD (Cardiovascular Disease)	With Comorbidity	\$169.3M	\$176.3M
CHF (Congestive Heart Failure)	All	\$102.6M	\$109.3M
CHF (Congestive Heart Failure)	Without Comorbidity	\$6.5M	\$5.7M
CHF (Congestive Heart Failure)	With Comorbidity	\$96.1M	\$103.6M



NH Medicaid

The pattern in medical costs for the NH Medicaid population is similar to that of commercial data in that the members with diabetes and a co-morbidity are a large proportion of the medical cost for all members with diabetes (see Table 6). In 2019, the total medical cost of treatment for members with diabetes (\$134.1M) was less than the total medical costs for members with hypertension (\$232.9M) and greater than the total medical cost for members with CHF (\$39.1M) and CVD (\$49.4M).

Table 6: Medical Cost for Diabetes, Hypertension, CVD, and CHF by Comorbidity Status for the NH Medicaid Population

Chronic Condition	Comorbidity Indication Level	Medical Cost (allowed) 1/1/2018 to 12/31/2018 in Millions	Medical Cost (allowed) 1/1/2019 to 12/31/2019 in Millions
Diabetes	All	\$112.7M	\$134.1M
Diabetes	Without Comorbidity	\$12.3M	\$15.3M
Diabetes	With Comorbidity	\$100.4M	\$118.9M
Hypertension	All	\$190.3M	\$232.9M
Hypertension	Without Comorbidity	\$34.1M	\$38.3M
Hypertension	With Comorbidity	\$156.2M	\$194.6M
CVD (Cardiovascular Disease)	All	\$42.8M	\$49.4M
CVD (Cardiovascular Disease)	Without Comorbidity	\$2.3M	\$2.0M
CVD (Cardiovascular Disease)	With Comorbidity	\$40.6M	\$47.4M
CHF (Congestive Heart Failure)	All	\$33.6M	\$39.1M
CHF (Congestive Heart Failure)	Without Comorbidity	\$2.3M	\$2.8M
CHF (Congestive Heart Failure)	With Comorbidity	\$31.3M	\$36.3M

NH Medicare

In the NH Medicare population, the medical costs grew slightly from CY 2017 to CY 2018 in that the costs for members with diabetes was \$945.5 million and \$983.2 million, respectively (see Table 7). In both CY 2017 and CY 2018, a large proportion of the costs for members with diabetes was for members with diabetes and a co-morbidity (\$929.0M and \$964.9M respectively).

In comparison with other chronic conditions, the costs for treatment for members with diabetes are greater than the current period costs for treatment for members with CVD (\$939.9M) and CHF (\$752.6M). The medical costs of treatment for members with hypertension are over twice that of costs for treatment for members with diabetes.

Table 7: Medical Cost for Diabetes, Hypertension, CVD, and CHF by Comorbidity Status for the NH Medicare Population

Chronic Condition	Comorbidity Indication Level	Medical Cost (allowed) 1/1/2017 to 12/31/2017 in Millions	Medical Cost (allowed) 1/1/2018 to 12/31/2018 in Millions
Diabetes	All	\$945.5M	\$983.2M
Diabetes	Without Comorbidity	\$16.5M	\$18.2M
Diabetes	With Comorbidity	\$929.0M	\$964.9M
Hypertension	All	\$2,059.0M	\$2,158.8M
Hypertension	Without Comorbidity	\$250.0M	\$278.5M
Hypertension	With Comorbidity	\$1,809.1M	\$1,880.3M
CVD (Cardiovascular Disease)	All	\$911.4M	\$939.9M
CVD (Cardiovascular Disease)	Without Comorbidity	\$11.4M	\$13.4M
CVD (Cardiovascular Disease)	With Comorbidity	\$900.1M	\$926.5M
CHF (Congestive Heart Failure)	All	\$722.7M	\$752.6M
CHF (Congestive Heart Failure)	Without Comorbidity	\$4.0M	\$5.8M
CHF (Congestive Heart Failure)	With Comorbidity	\$718.7M	\$746.8M



Summary of NH Medical Costs for Diabetes and Related Chronic Conditions

In Figure 1 below, the three types of payers are presented side-by-side for each of the four conditions (diabetes, hypertension, CVD, and CHF) for both time periods.

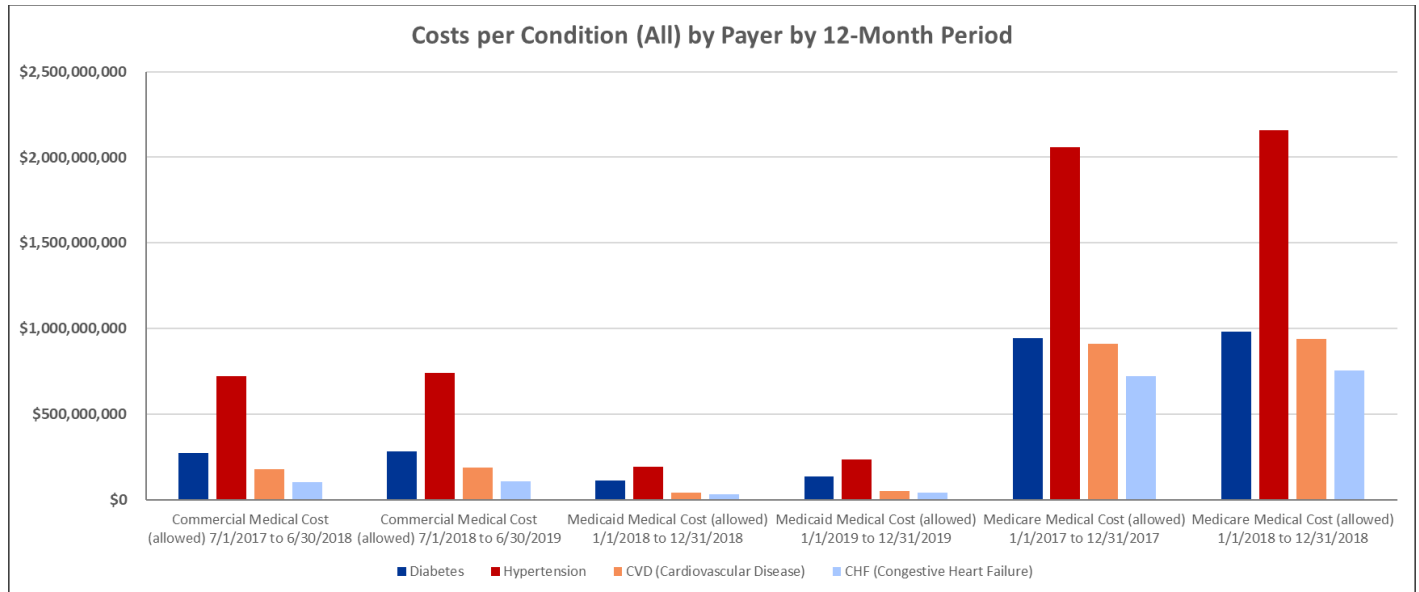


Figure 1: Costs per Condition (Diabetes, Hypertension, CVD, and CHF) by Payer by 12-Month Period

Note: The cost estimates from the commercial data represent about half of the actual costs in the commercial population. See notes about the data sources in the Overview section above.



Pharmaceutical Treatment for Diabetes – Therapeutic Classes of Drugs

Analysis of pharmacy claims can be done in a way to organize prescriptions into therapeutic classes, or groupings, of drugs. In this analysis, the Wolter Kluwer's UpToDate[®] software was used to identify the therapeutic class of antidiabetic agents and compare to other therapeutic classes of prescription drugs⁷. For an **estimate of the number of prescriptions** in each therapeutic class, this analysis estimated the number of prescriptions per 1000 prescriptions filled. For an **estimate of the cost of the prescriptions** by therapeutic class, this analysis estimated the cost per member per month.

⁷ ©2020 UpToDate, Inc. and/or its affiliates. All rights reserved



NH Commercial

The antidiabetic drug class is the fifth largest class (see Figure 2) for the NH commercial data in NH CHIS in FY 2018.

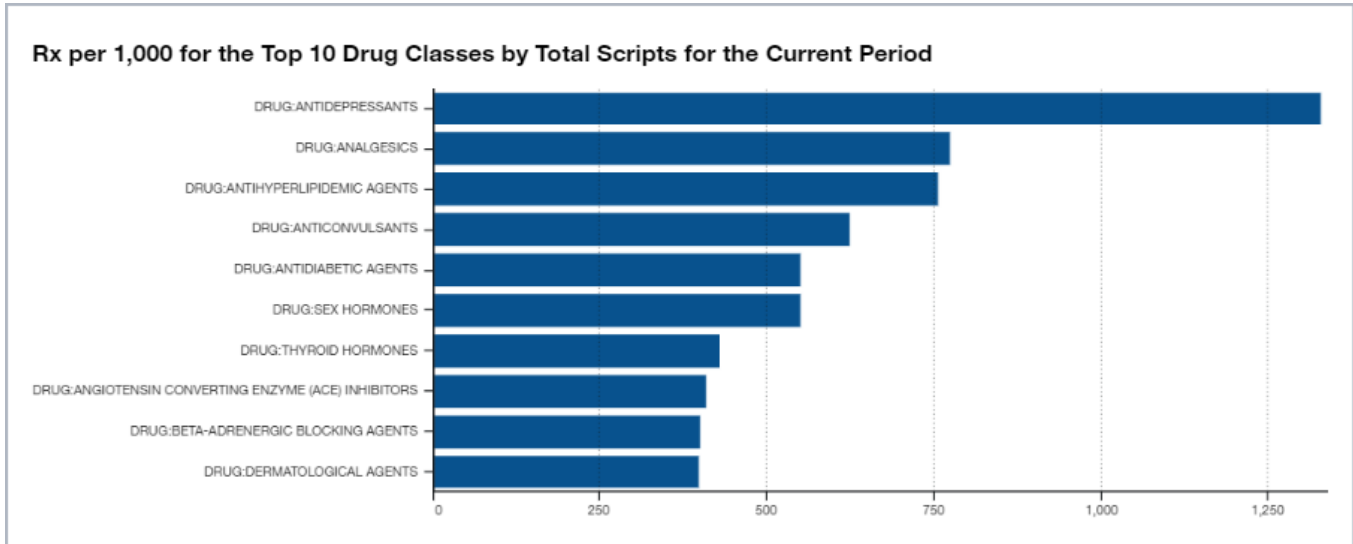


Figure 2: Refills per 1,000 Members for the Top 10 Drug Classes (Ranked by Total Scripts) from July 1, 2018 to June 30, 2019 for the NH Commercial Data

Antidiabetic drugs make up 5.7% of the member months with a prescription in the analytic period, representing 551 prescriptions per 1000 members (see Table 8) and a total cost of \$102.9 million. This means that approximately 6% of the commercial population had at least one prescription fill for an antidiabetic drug.

Table 8: Antidiabetic Agents from July 1, 2018 to June 30, 2019 for the NH Commercial Data

Drug Class	% of Member Months 7/1/2018 to 6/30/2019	Class Cost 7/1/2018 to 6/30/2019 in Millions	Rx per 1,000 7/1/2018 to 6/30/2019	Cost per Rx 7/1/2018 to 6/30/2019
ANTIDIABETIC AGENTS	5.70%	\$102.9M	551.84	\$348.78



Among the ten most commonly filled drug classes in the commercial population, the antidiabetic drug class is, by far, the most expensive for the members with those prescriptions (Figure 3). For this population, the NH CHIS data analysis demonstrates a cost of \$348.78 per member per month (Table 8).

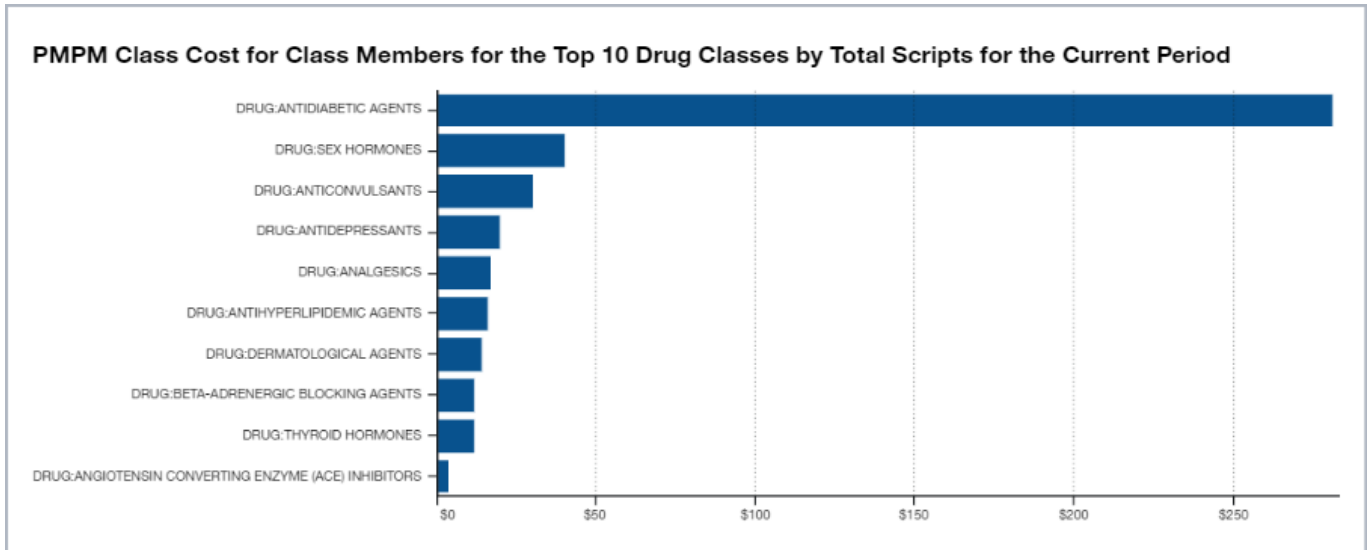


Figure 3: PMPM Class Cost for Class Members for the Top 10 Drug Classes (Ranked by Total Scripts) from July 1, 2018 to June 30, 2019 for the NH Commercial Data



NH Medicaid

The antidiabetic drug class is the 8th largest class (see Figure 4) for the NH Medicaid population in 2019.

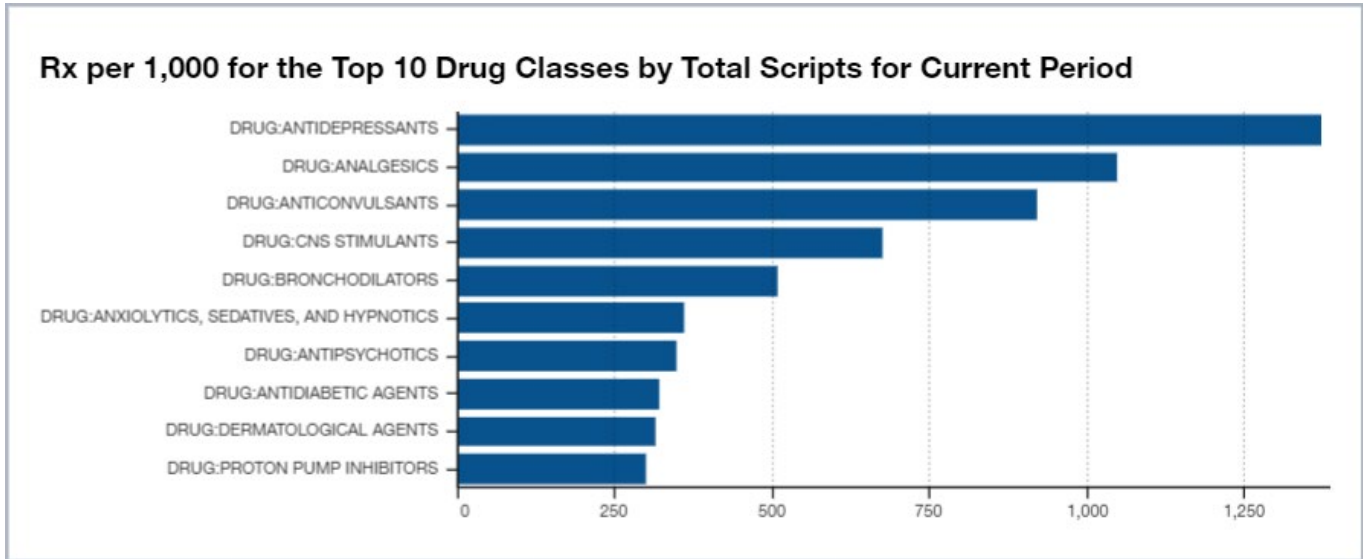


Figure 4: Refills per 1,000 Members for the Top 10 Drug Classes (Ranked by Total Scripts) from January 1, 2019 to December 31, 2019 for the NH Medicaid Population

Antidiabetic drugs represent 2.86% of the member months with a prescription in the analytic period, which makes up 321 prescriptions per 1000 members (see Table 9) and a total cost of \$15.4 million in 2019 for NH Medicaid.

Table 9: Antidiabetic Agents from January 1, 2019 to December 31, 2019 for the NH Medicaid Population

Drug Class	% of Member Months 1/1/2019 to 12/31/2019	Class Cost 1/1/2019 to 12/31/2019 in Millions	Rx per 1,000 1/1/2019 to 12/31/2019	Cost per Rx 1/1/2019 to 12/31/2019
ANTIDIABETIC AGENTS	2.86%	\$15.4M	321.74	\$272.20



The antidiabetic drug class is the most expensive per member per month for the NH Medicaid population at \$272.20 per member per month for those that had a prescription in the antidiabetic drug class (Figure 5).

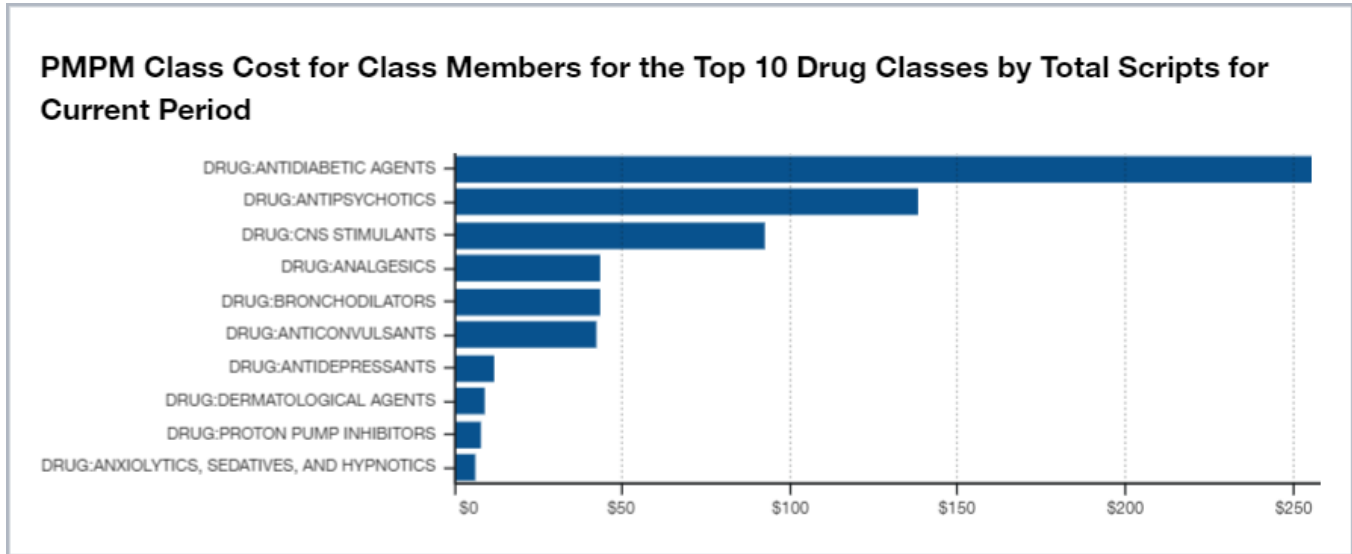


Figure 5: PMPM Class Cost for Class Members for the Top 10 Drug Classes (Ranked by Total Scripts) from January 1, 2019 to December 31, 2019 for the NH Medicaid Population



NH Medicare

The antidiabetic drug class is the sixth largest class of prescriptions per 1,000 (see Figure 6) for the NH Medicare population in 2018.

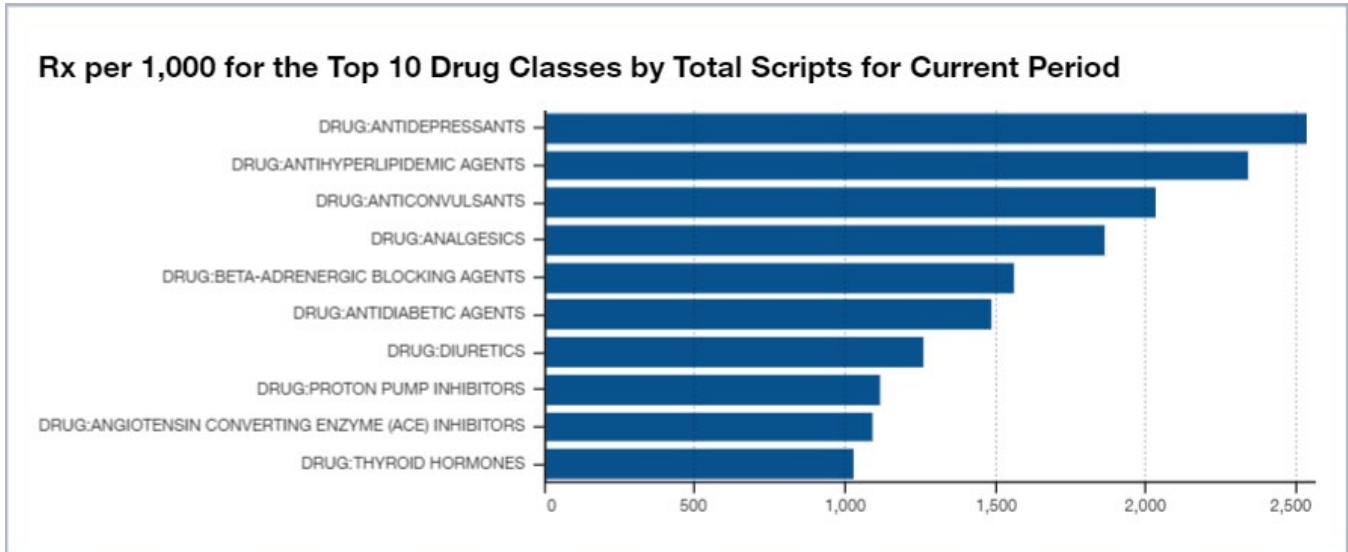


Figure 6: Refills per 1,000 Members for the Top 10 Drug Classes (Ranked by Total Scripts) from January 1, 2018 to December 31, 2018 for the NH Medicare Population

Antidiabetic drugs represent 16.96% of the member months with a prescription in the analytic period, which makes up 1,492 prescriptions per 1000 members (see Table 10) and a total cost of \$90.7 million in 2018 for NH Medicare.

Table 10: Antidiabetic Agents from January 1, 2018 to December 31, 2018 for the NH Medicare Population

Drug Class	% of Member Months 1/1/2018 to 12/31/2018	Class Cost 1/1/2018 to 12/31/2018 in Millions	Rx per 1,000 1/1/2018 to 12/31/2018	Cost per Rx 1/1/2018 to 12/31/2018
ANTIDIABETIC AGENTS	16.96%	\$90.7M	1,492.02	\$313.74



For members in the NH Medicare population with an antidiabetic drug prescription, the antidiabetic drug class is the most expensive per member per month (Figure 7) at \$313.74 (Table 8).

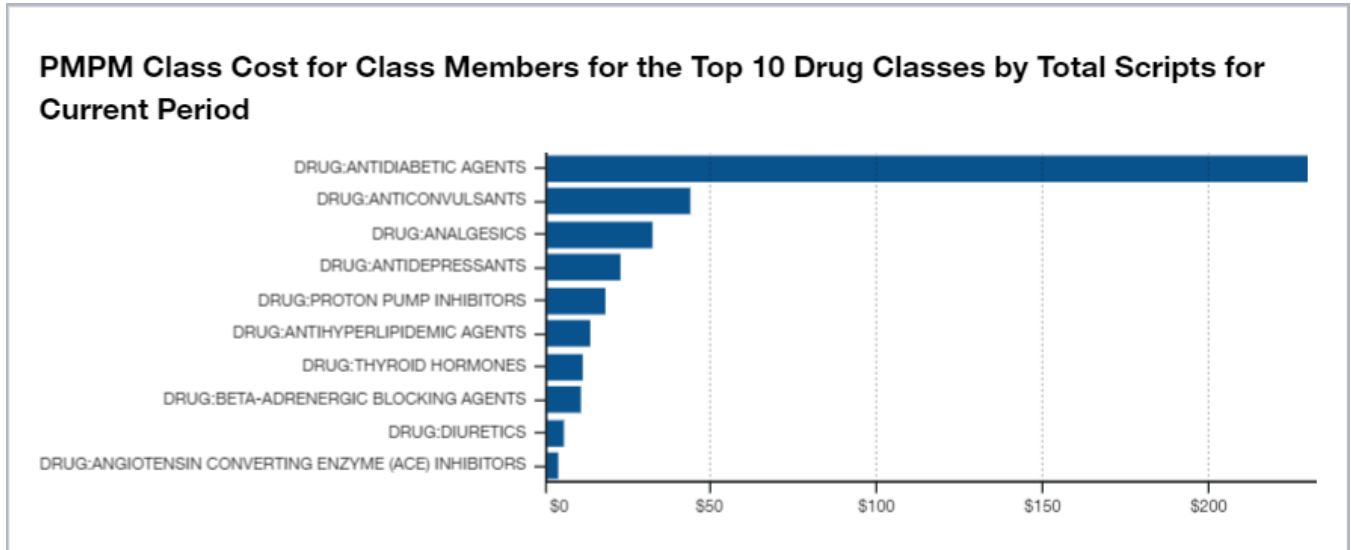


Figure 7: PMPM Class Cost for Class Members for the Top 10 Drug Classes (Ranked by Total Scripts) from January 1, 2018 to December 31, 2018 for the NH Medicare Population



Pharmaceutical Treatment for Diabetes – Drugs by National Drug Code

The pharmaceutical claims analysis by individual drugs is conducted at the level of National Drug Code⁸ (NDC). The analysis subsets the pharmacy data and uses the top 200 drugs by allowed cost for the entire population per analytic period. The analysis in this report provides PMPMs for the top 10 (of the Top 200) NDCs as ranked by allowed cost.

⁸ Wolter Kluwer's UpToDate® software was used to identify National Drug Codes. © 2020 UpToDate, Inc. and/or its affiliates. All rights reserved.



NH Commercial

Victoza, Trulicity Pen, and the Lantus Solostar Pen are drugs used in the treatment of diabetes and are in the top 10 most expensive drugs in NH Commercial data in NH CHIS in FY 2018.

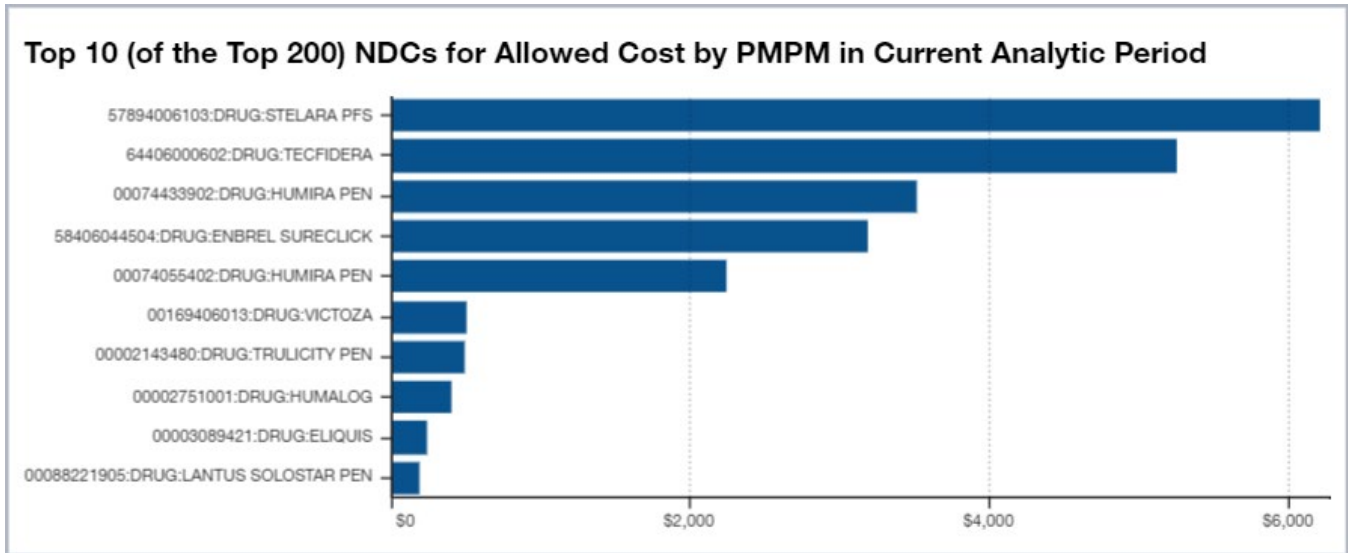


Figure 8: Top 10 NDCs by Allowed Cost of the Top 200 NDCs (by Allowed Cost for Entire Population), Ordered by PMPM from July 1, 2018 to June 30, 2019 for the NH Commercial Data



NH Medicaid

There are no antidiabetic drugs in the top 10 most expensive drugs in NH Medicaid in 2019.

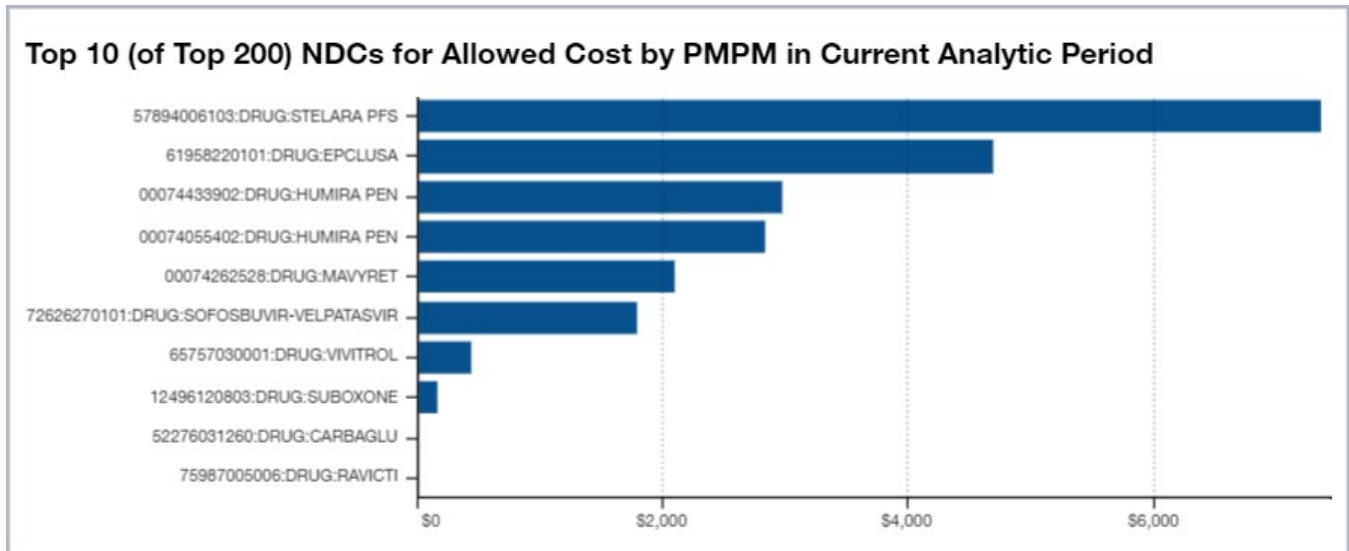


Figure 9: Top 10 NDCs by Allowed Cost of the Top 200 NDCs (by Allowed Cost for Entire Population), Ordered by PMPM from January 1, 2019 to December 31, 2019 for the NH Medicaid Population



NH Medicare

Lantus Solostar Pen is in the top 10 most expensive drugs in NH Medicare in 2018.

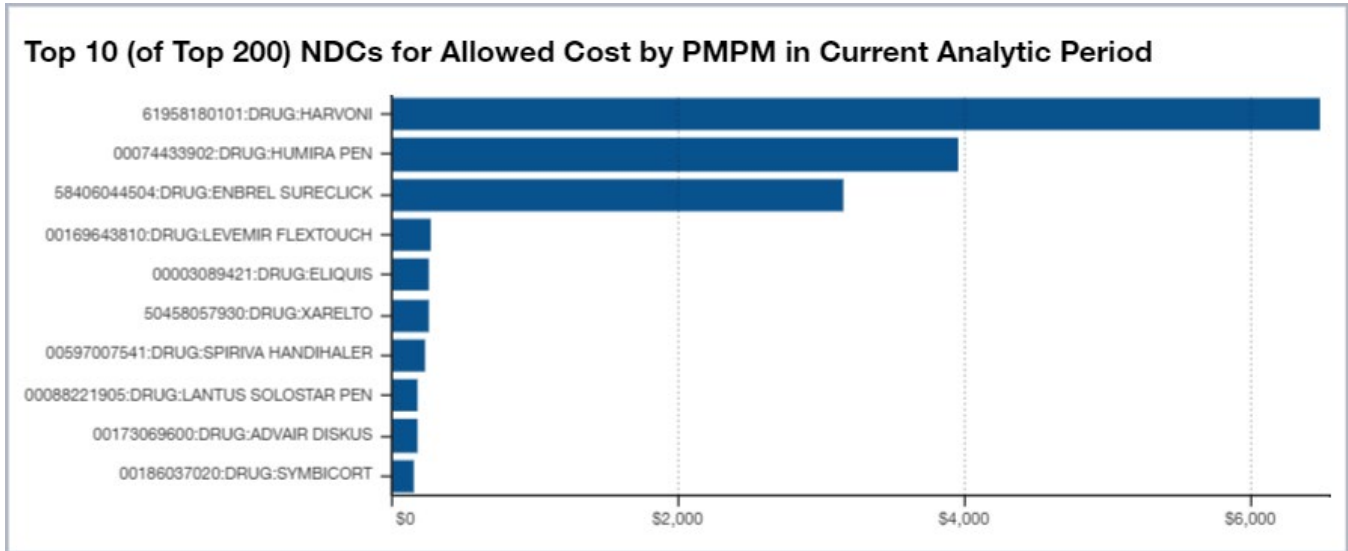


Figure 10: Top 10 NDCs by Allowed Cost of the Top 200 NDCs (by Allowed Cost for Entire Population), Ordered by PMPM from January 1, 2018 to December 31, 2018 for the NH Medicare Population



Summary

The high cost of medical and pharmaceutical treatment for diabetes nationally is well-documented. This report provides estimates for costs of treatment in NH commercial, Medicaid, and Medicare populations. While the commercial data estimate has limitations and is likely a significant underestimate of the cost of diabetes in that population, the combined cost of diabetes across all three payers is more than \$1.6 billion dollars according to this analysis.

Table 11: Medical, Pharmacy and Total Costs of Diabetes for Commercial, Medicaid, and Medicare

Insurance Coverage	Medical		Pharmacy		Total in Millions
	% of Member Months with Condition	Costs in Millions	% of Member Months with Antibiotic Agents	Costs in Millions	
Commercial (FY 2018)	6.57%	\$283.1M ⁹	5.70%	\$102.9M	\$386.0M
Medicaid (2019)	3.46%	\$134.1M	2.86%	\$15.4M	\$149.5M
Medicare (2018)	20.98%	\$983.2M	16.96%	\$90.7M	\$1,073.8M

⁹ See notes about the estimate of costs in the commercial population in the “Limitations” section



Limitations

There are several limitations to this analysis. As outlined in the Overview, the commercial medical data only represents about half of the actual commercial costs for treatment of diabetes in the commercial population. As noted in the Methodology in the Appendix, the analysis only includes members with 9 or more months of eligibility; by not including members with less than 9 months of eligibility, the analysis results in an underestimate of the true cost of diabetes treatment in NH.

The analysis only includes costs of diabetes that are captured in health care claims data and does not include an estimate of other costs associated with treatment of diabetes (e.g., time away from work, lost wages).

This report does not include analysis of the racial and ethnic disparities of diabetes and the disproportionate cost of the disease borne by racial and ethnic minorities. The examination of health disparities is important; however, at this time, race and ethnicity fields are not available/reliable in the claims data and therefore not included in this report. IHPP will continually review the quality of the race and ethnicity data and include it when it is available for reporting.

Authors

Erica Plante, Senior Scientific Analyst, IHPP

Amy Costello, Director of Health Analytics, IHPP

Jo Porter, Director, IHPP

Chris White, Senior Technology Manager, IHPP

Funding

Funding provided by NH Department of Health and Human Services



Appendix A

About the Data for the NH CHIS Commercial Population

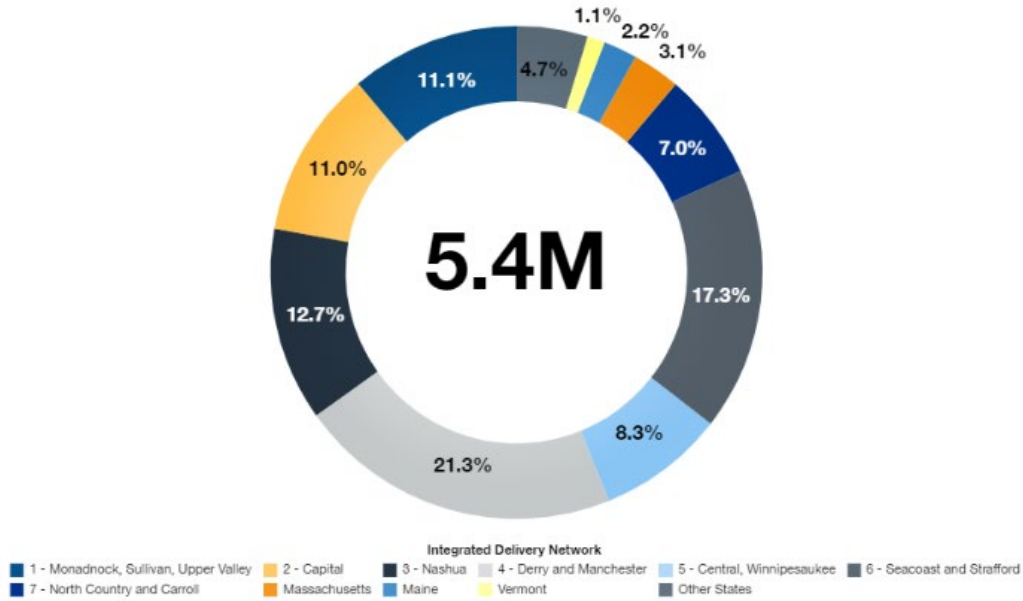
Member Selection Criteria for Analysis:

- *Age:* 0-64
- *Residence:* Members with policies that originate in NH; members can reside in NH or other states
- *Eligibility requirements:* During a given 12-month measurement period (e.g. current period), a member is included in the analysis if the member was active for at least 9 months of the given 12-month measurement period (does not apply to members less than one year old).
- *Analytic Periods:* Data are displayed by Previous Analytic Period and Current Analytic Period. The Current Analytic Period is based on the most recent 12 months of available claims data with the Previous Analytic Period being the 12 months prior. The Current Analytic Period for the NH Commercial population is 7/1/2018 to 6/30/2019 and the Previous Analytic Period is 7/1/2017 to 6/30/2018.

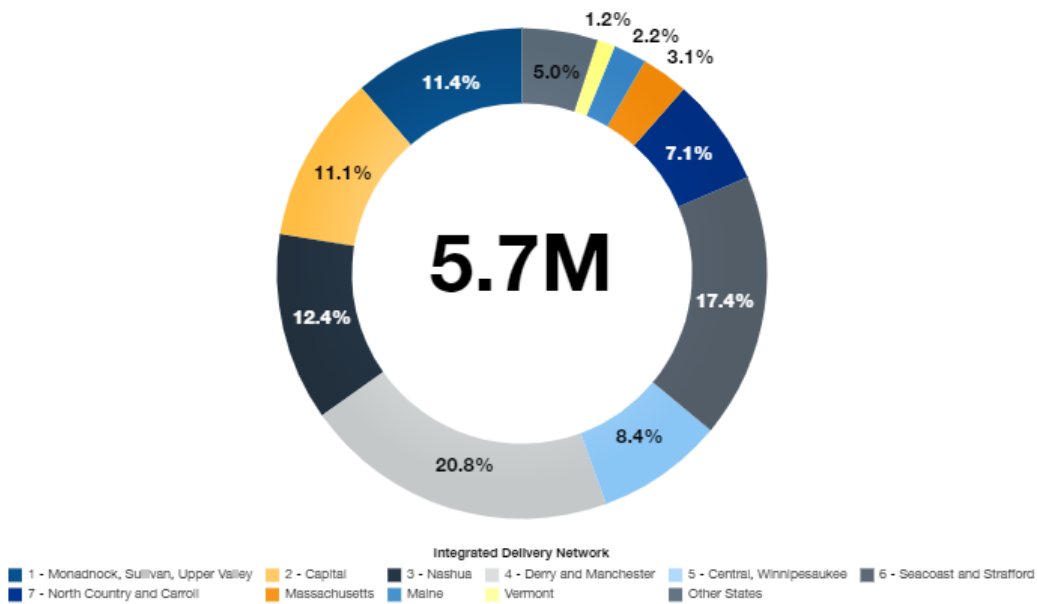


Commercial Medical Data Distribution:

Current Medical Member Month Count in Data by Geography

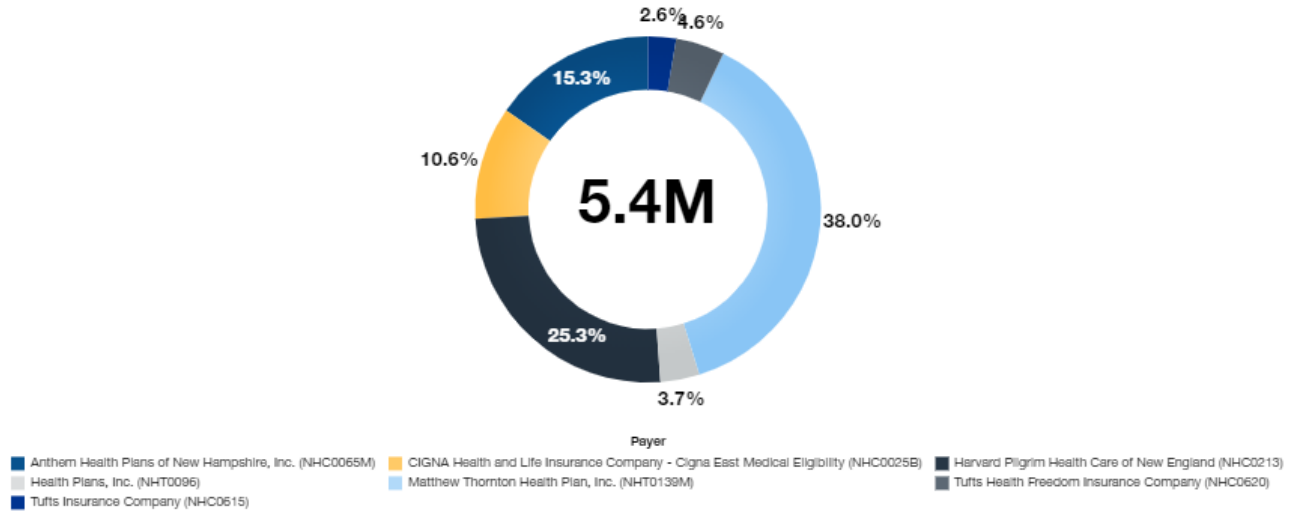


Previous Medical Member Month Count in Data by Geography

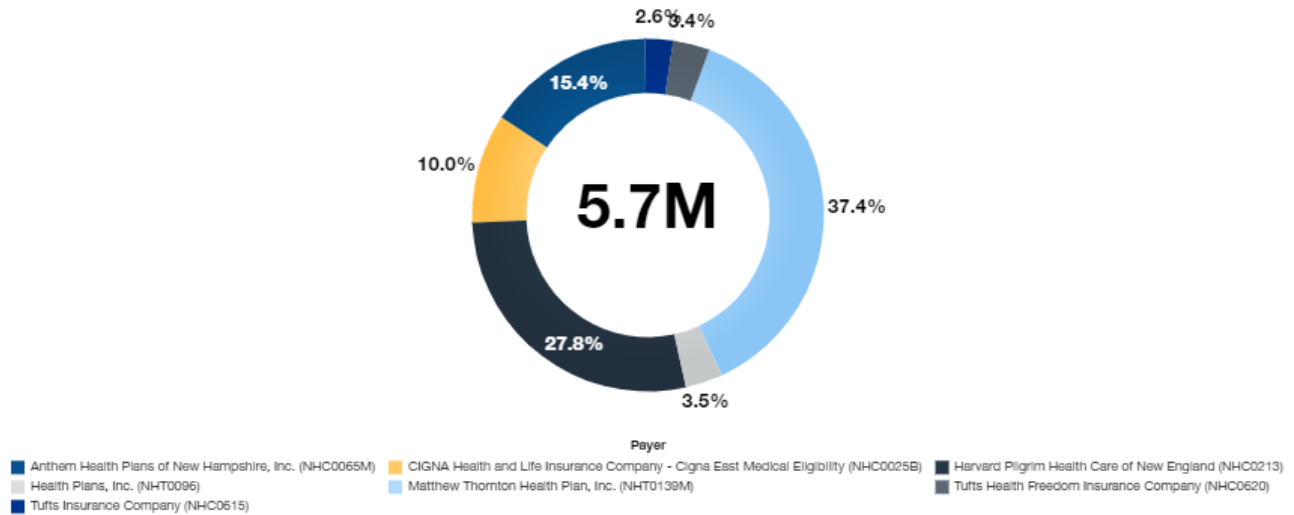




Current Medical Member Month Counts in Data by Payer

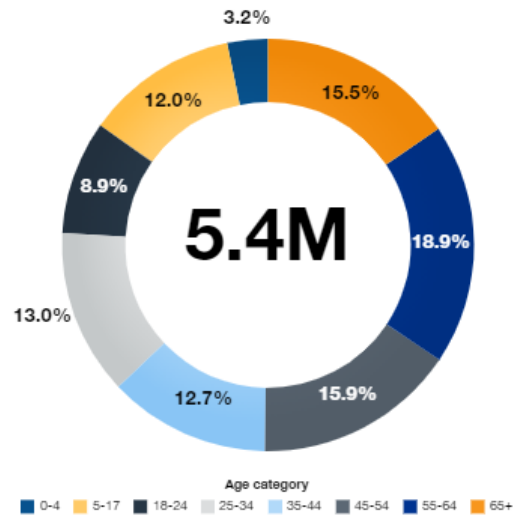


Previous Medical Member Month Counts in Data by Payer

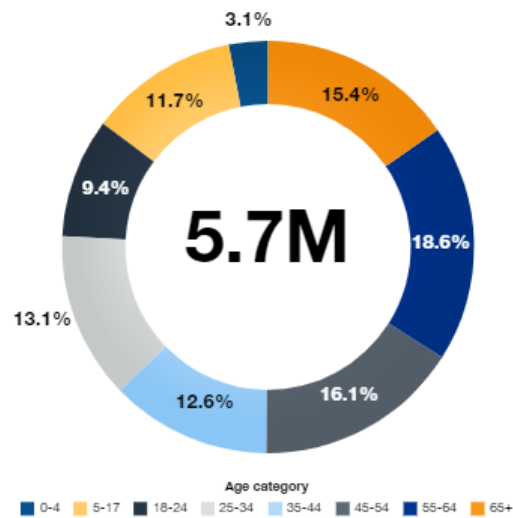




Current Medical Member Month Counts in Data by Age



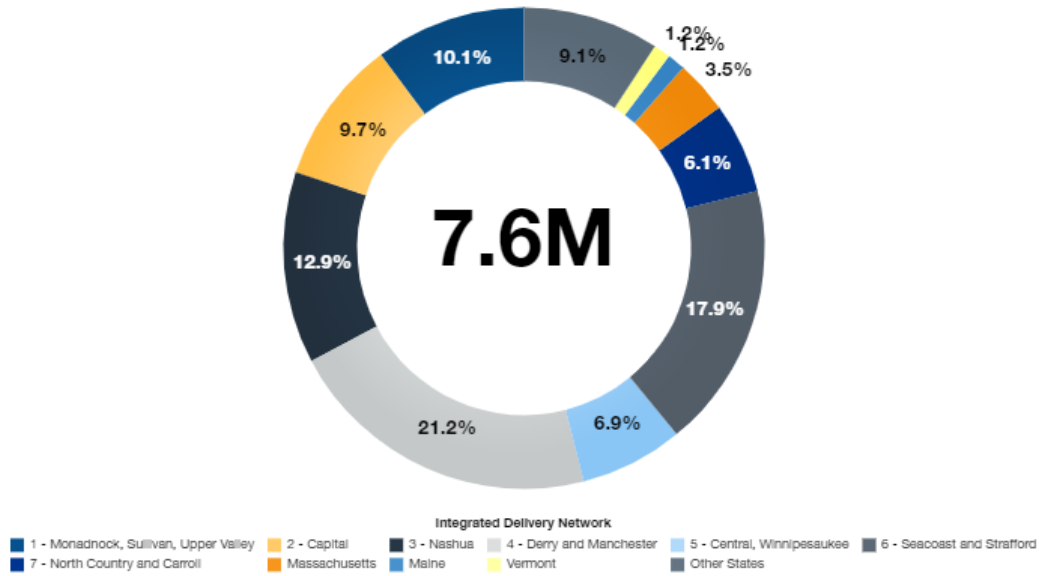
Previous Medical Member Month Counts in Data by Age



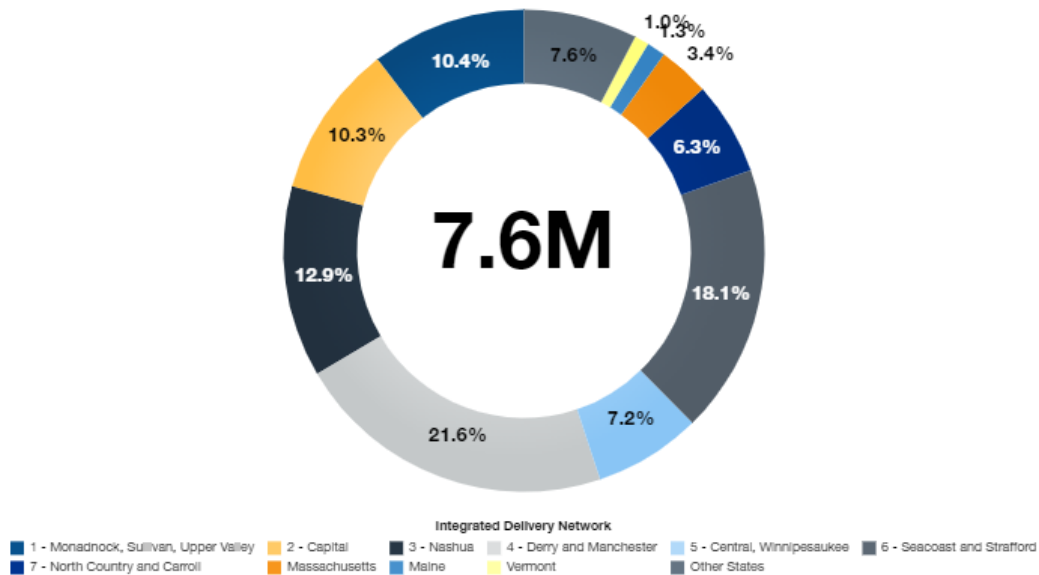


Commercial Pharmacy Data Distribution:

Current Pharmacy Member Month Counts in Data by Geography

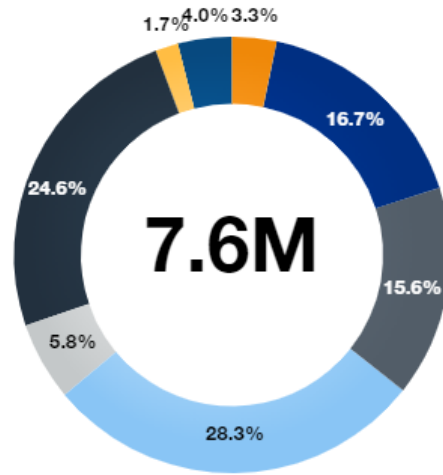


Previous Pharmacy Member Month Counts in Data by Geography



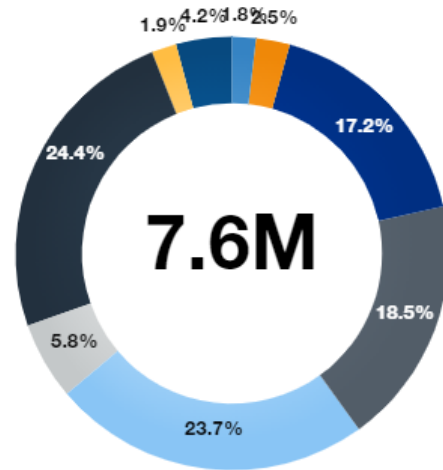


Current Pharmacy Member Month Counts in Data by Payer



- Payer
- Anthem Health Plans of New Hampshire, Inc. (NHC0065P)
 - CIGNA Health and Life Insurance Company - Cigna East Pharmacy Eligibility (NHC0025C)
 - Matthew Thornton Health Plan, Inc. (NHT0139P)
 - Anthem Health Plans of New Hampshire, Inc. (NHC0065V)
 - Express Scripts Administrators, L.L.C. (NHT0503)
 - Tufts Health Freedom Insurance Company (NHC0620)
 - Caremark (NHT0005)
 - Harvard Pilgrim Health Care of New England (NHC0213)

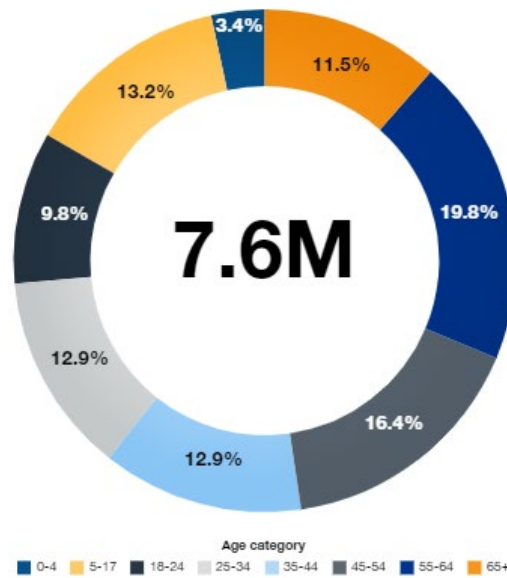
Previous Pharmacy Member Month Counts in Data by Payer



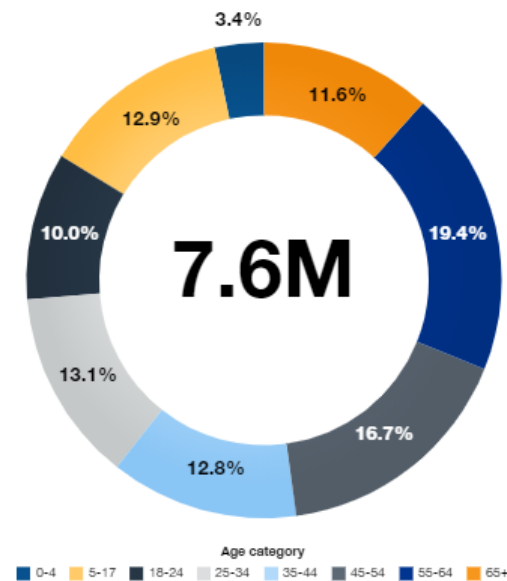
- Payer
- Anthem Health Plans of New Hampshire, Inc. (NHC0065P)
 - CIGNA Health and Life Insurance Company - Cigna East Pharmacy Eligibility (NHC0025C)
 - Matthew Thornton Health Plan, Inc. (NHT0139P)
 - Anthem Health Plans of New Hampshire, Inc. (NHC0065V)
 - Express Scripts Administrators, L.L.C. (NHT0503)
 - Tufts Health Freedom Insurance Company (NHC0620)
 - Caremark (NHT0005)
 - Harvard Pilgrim Health Care of New England (NHC0213)
 - Tufts Insurance Company (NHC0615)



Current Pharmacy Member Month Counts in Data by Age



Previous Pharmacy Member Month Counts in Data by by Age





About the NH Medicaid Population

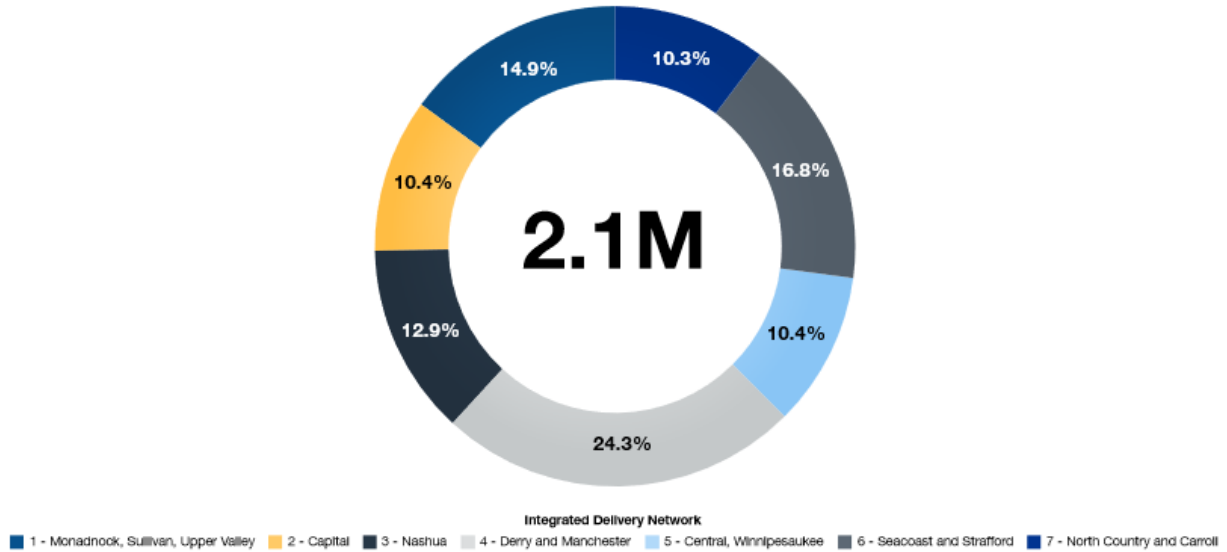
Member Selection Criteria for Analysis:

- *Age:* 0-64
- *Residence:* Members with policies that originate in NH; members can reside in NH or other states.
- *Eligibility requirements:* During a given 12-month measurement period (e.g. current period), a member is included in the analysis if the member was active for at least 9 months of the given 12-month measurement period (does not apply to members less than one year old).
- *Analytic Period:* Data are displayed by Previous Analytic Period and Current Analytic Period. The Current Analytic Period is based on the most recent 12 months of available claims data with the Previous Analytic Period being the 12 months prior. The Current Analytic Period for the NH Medicaid population is 1/1/2019 to 12/31/2019 and the Previous Analytic Period is 1/1/2018 to 12/31/2018.

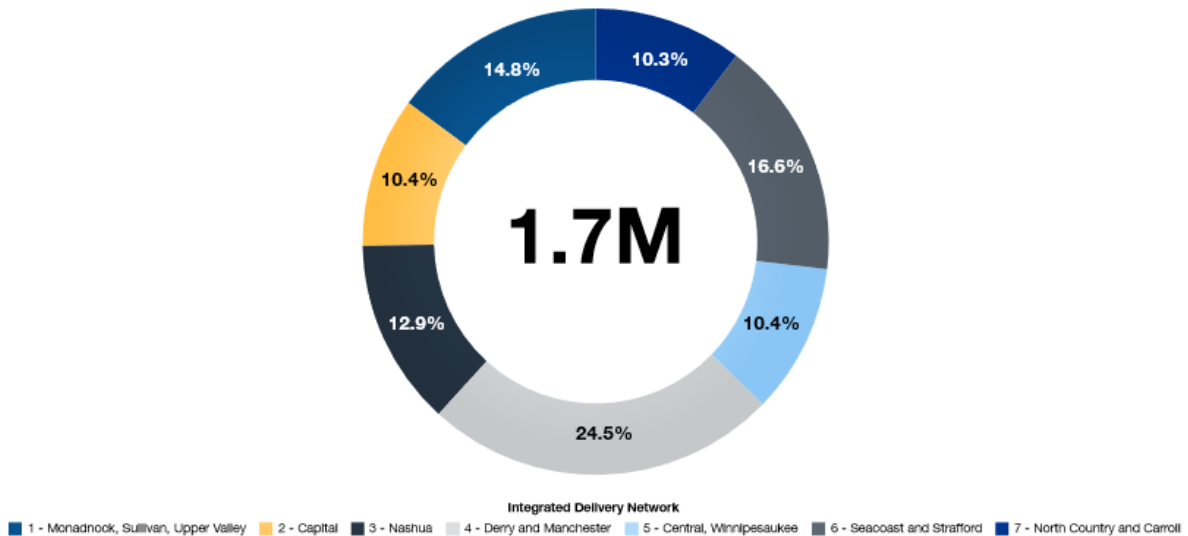


NH Medicaid Medical and Pharmacy Data Distribution:

Current Medical Member Month Count in Data by Geography

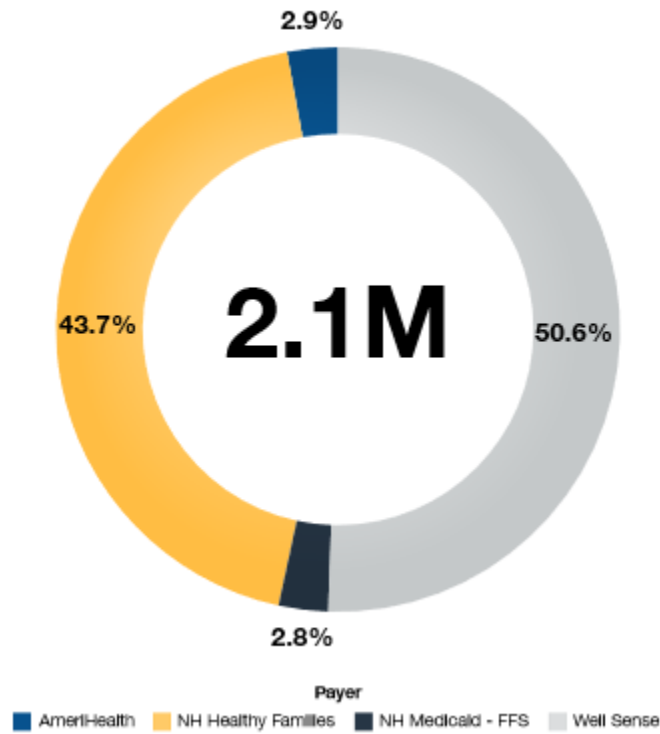


Previous Medical Member Month Count in Data by Geography

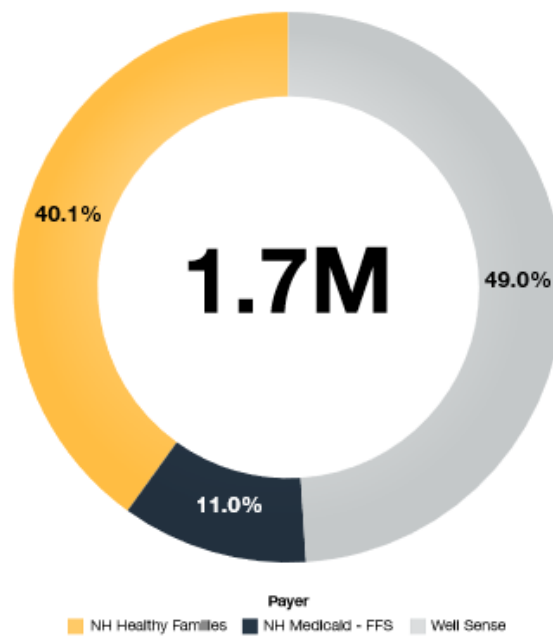




Current Medical Member Month Counts in Data by Payer

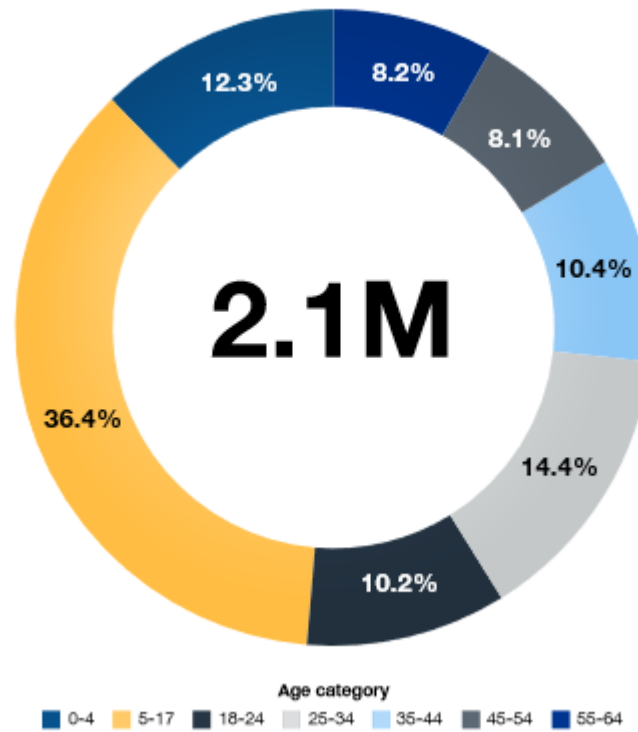


Previous Medical Member Month Counts in Data by Payer

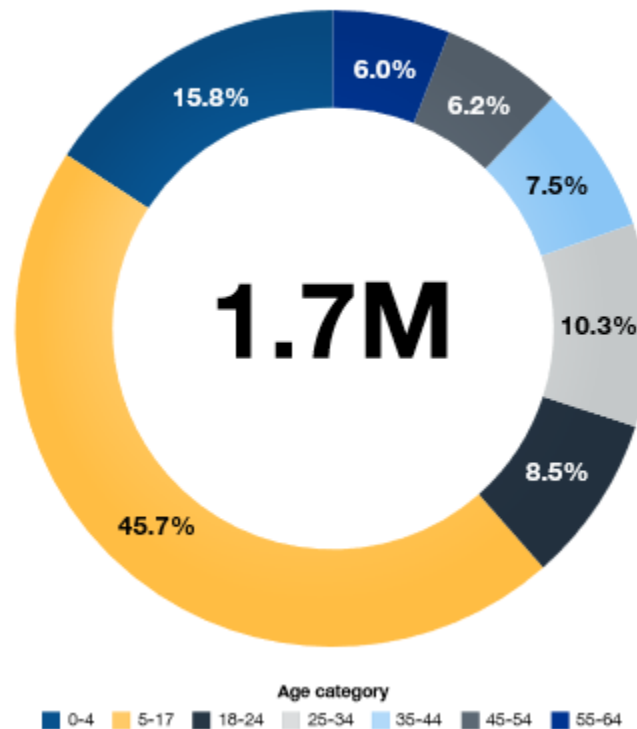




Current Medical Member Month Counts in Data by Age



Previous Medical Member Month Counts in Data by Age





About the NH Medicare Population

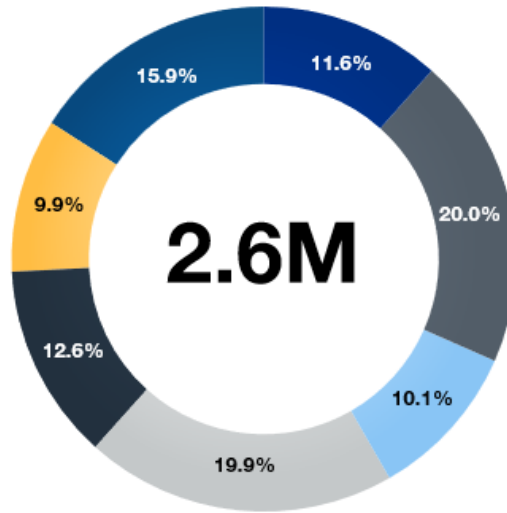
Member Selection Criteria for Analysis:

- *Age:* All ages
- *Residence:* Members with policies that originate in NH. Members can reside in NH or other states to be included in the report suite, however for this report, the data has been filtered to only include members who lived within the one of NH's seven Integrated Delivery Networks.
- *Eligibility requirements:* During a given 12-month measurement period (e.g. current period), a member is included in the analysis if the member was active for at least 9 months of the given 12-month measurement period (does not apply to members less than one year old).
- *Analytic Period:* Data are displayed by Previous Analytic Period and Current Analytic Period. The Current Analytic Period is based on the most recent 12 months of available claims data with the Previous Analytic Period being the 12 months prior. The Current Analytic Period for the NH Medicare population is 1/1/2018 to 12/31/2018 and the Previous Analytic Period is 1/1/2017 to 12/31/2017.



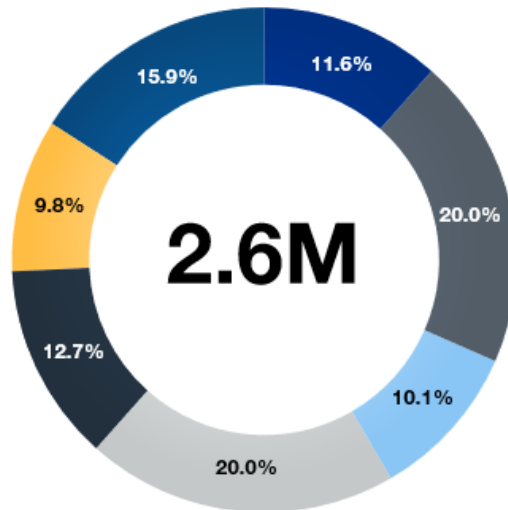
NH Medicare Medical Data Distribution:

Current Medical Member Month Count in Data by Geography



Integrated Delivery Network
 1 - Monadnock, Sullivan, Upper Valley 2 - Capital 3 - Nashua 4 - Derry and Manchester 5 - Central, Winnipesaukee 6 - Seacoast and Strafford 7 - North Country and Carroll

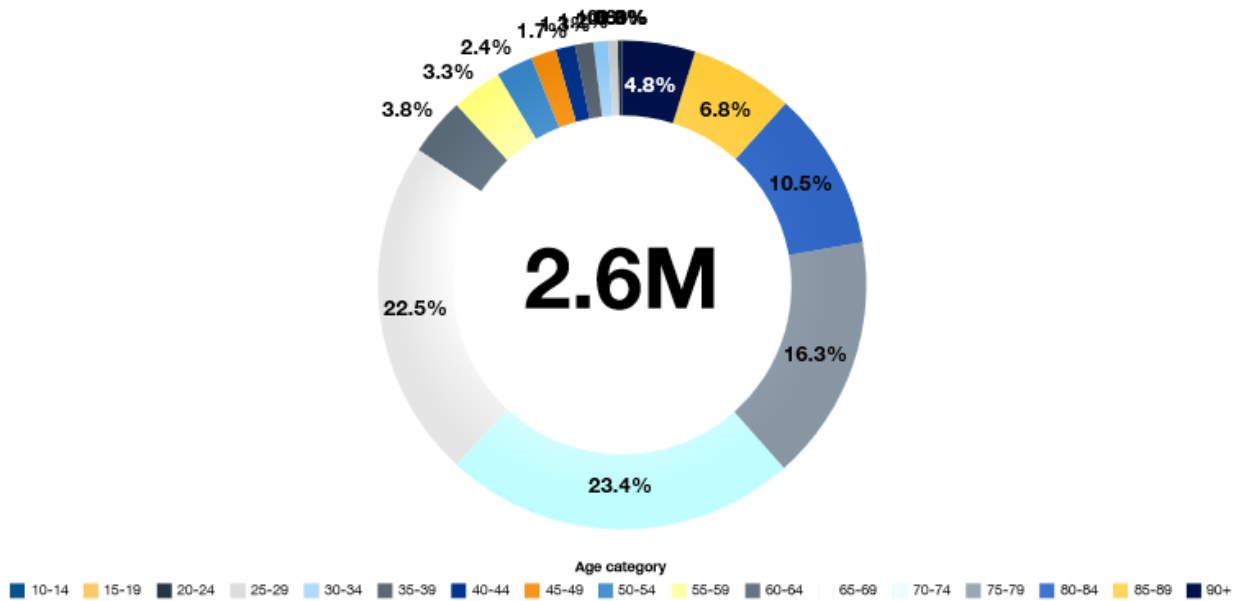
Previous Medical Member Month Count in Data by Geography



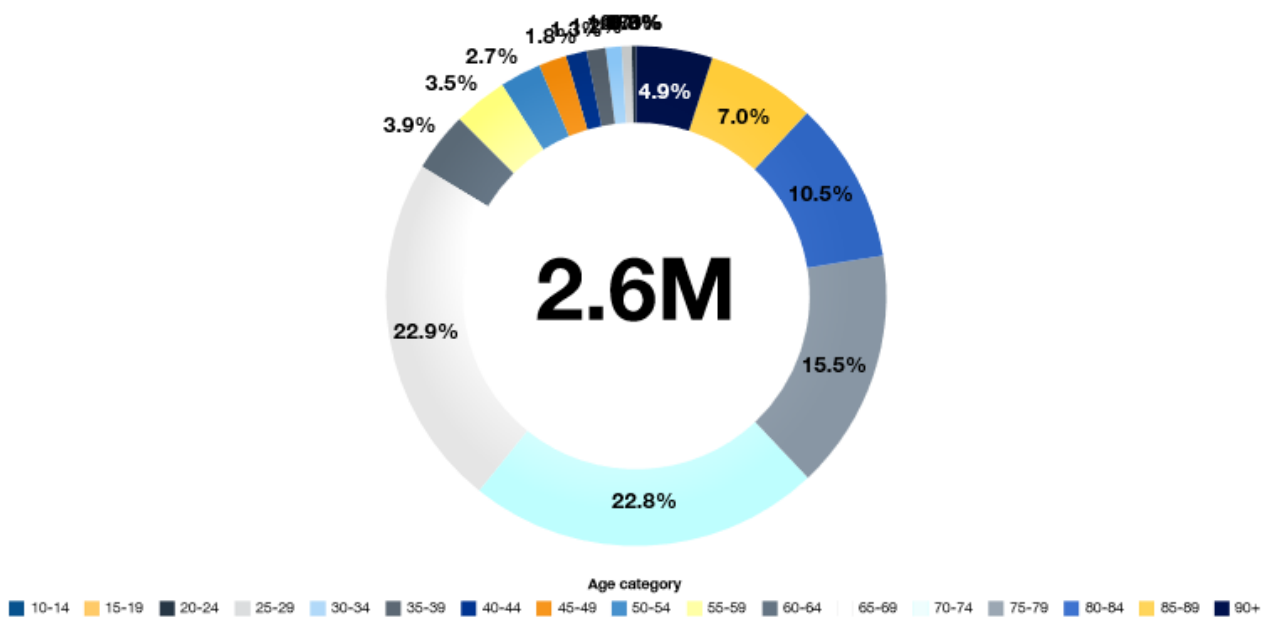
Integrated Delivery Network
 1 - Monadnock, Sullivan, Upper Valley 2 - Capital 3 - Nashua 4 - Derry and Manchester 5 - Central, Winnipesaukee 6 - Seacoast and Strafford 7 - North Country and Carroll



Current Medical Member Month Counts in Data by Age



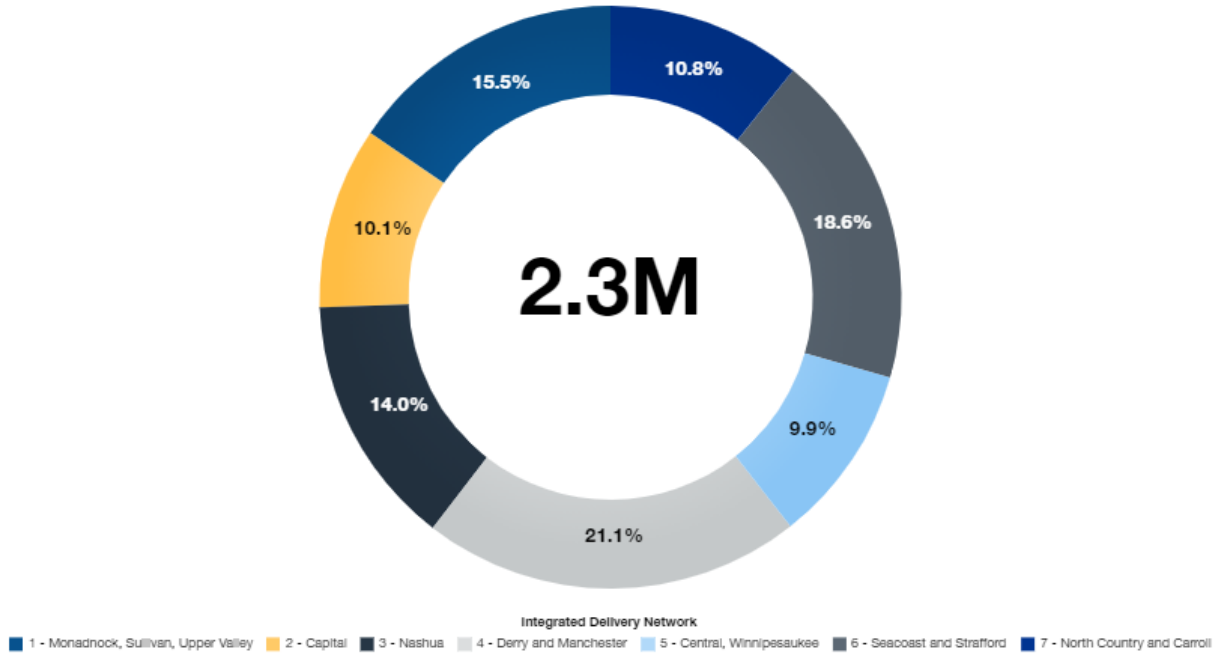
Previous Medical Member Month Counts in Data by Age



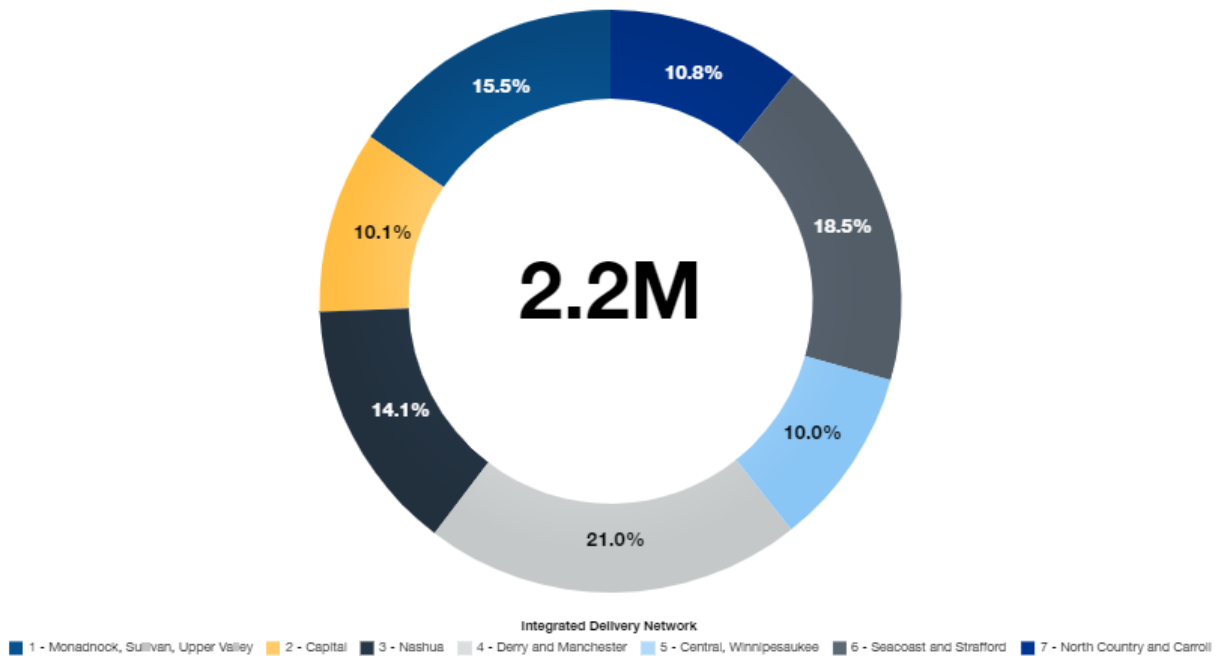


NH Medicare Pharmacy Data Distribution:

Current Pharmacy Member Month Counts in Data by Geography

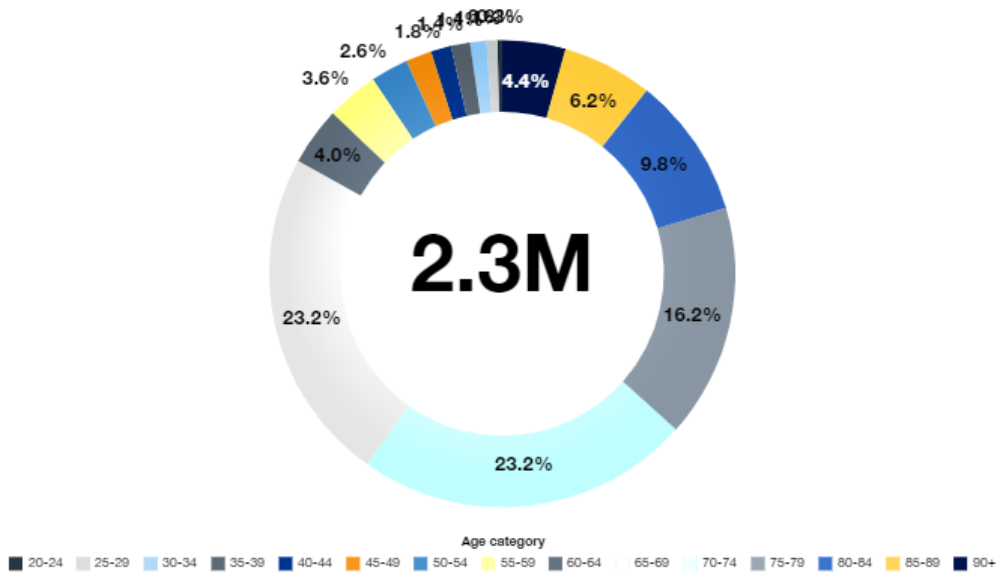


Previous Pharmacy Member Month Counts in Data by Geography

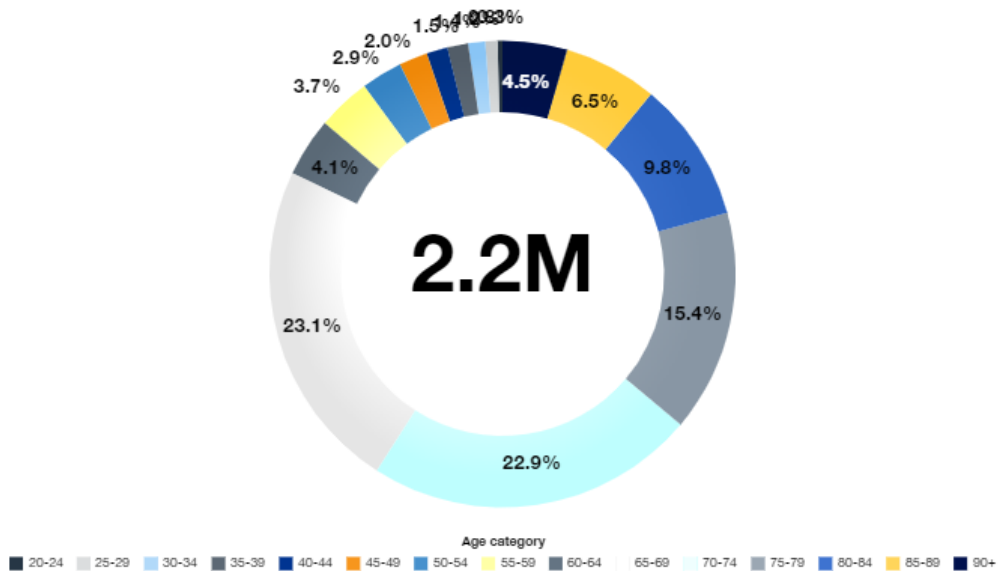




Current Pharmacy Member Month Counts in Data by Age



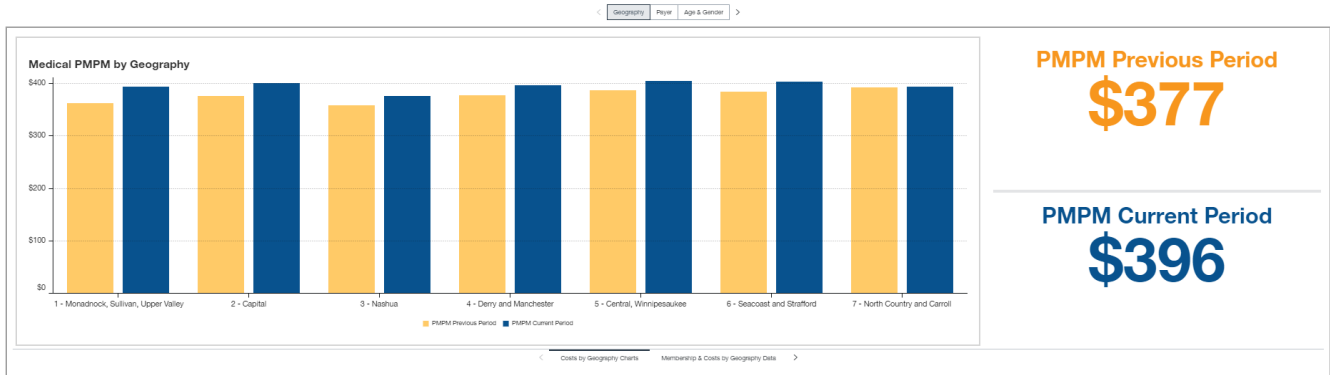
Previous Pharmacy Member Month Counts in Data by Age



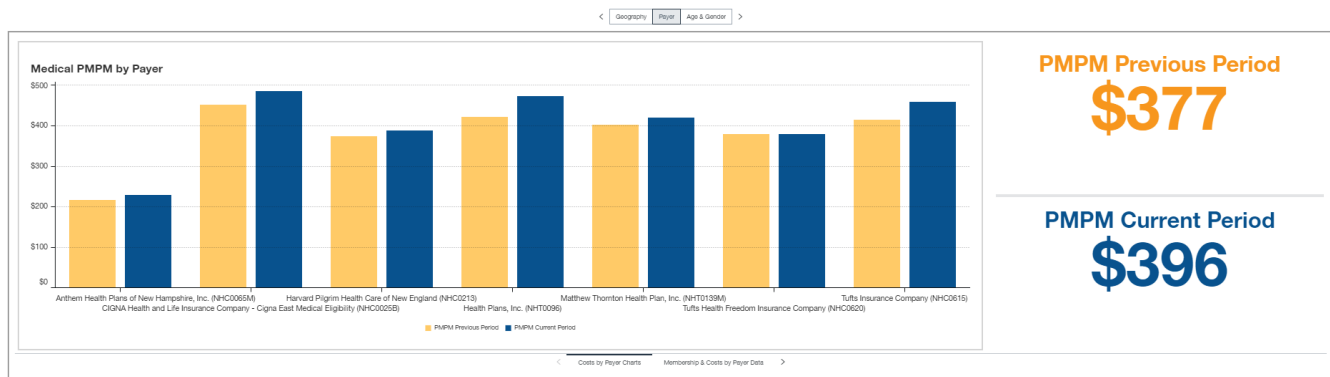


Appendix B

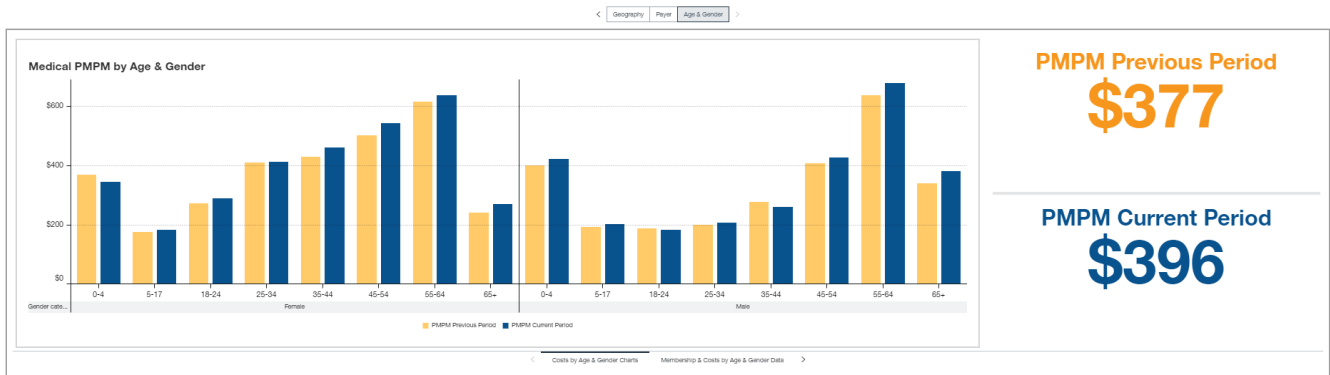
Commercial Overall Medical Costs:



This report uses the following parameters: (Integrated Delivery Network = 1 - Monadnock, Sullivan, Upper Valley) OR (Integrated Delivery Network = 2 - Capital) OR (Integrated Delivery Network = 3 - Nashua) OR (Integrated Delivery Network = 4 - Derry and Manchester) OR (Integrated Delivery Network = 5 - Central, Winnepesaukee) OR (Integrated Delivery Network = 6 - Seacoast and Stafford) OR (Integrated Delivery Network = 7 - North Country and Carroll)



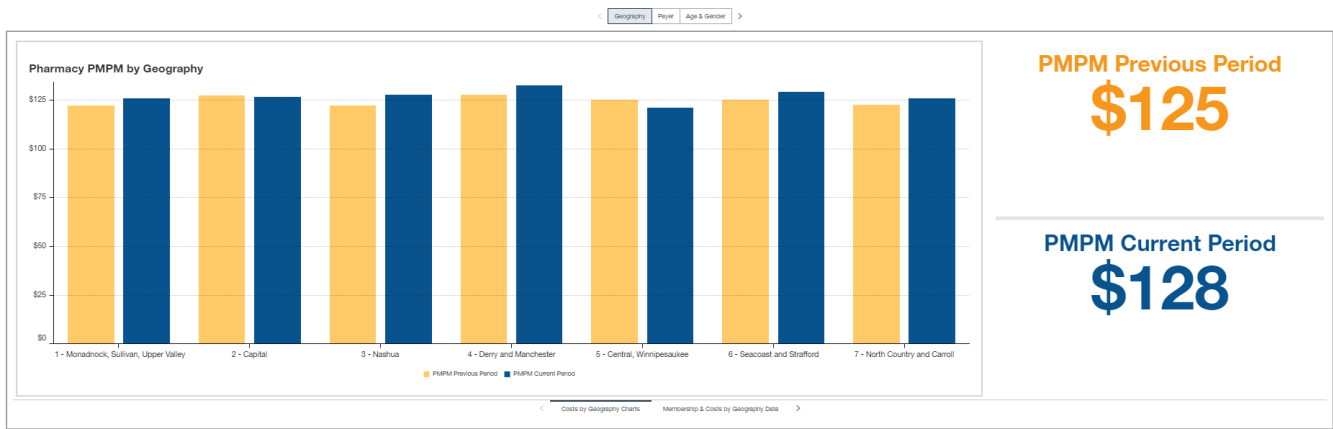
This report uses the following parameters: (Integrated Delivery Network = 1 - Monadnock, Sullivan, Upper Valley) OR (Integrated Delivery Network = 2 - Capital) OR (Integrated Delivery Network = 3 - Nashua) OR (Integrated Delivery Network = 4 - Derry and Manchester) OR (Integrated Delivery Network = 5 - Central, Winnepesaukee) OR (Integrated Delivery Network = 6 - Seacoast and Stafford) OR (Integrated Delivery Network = 7 - North Country and Carroll)



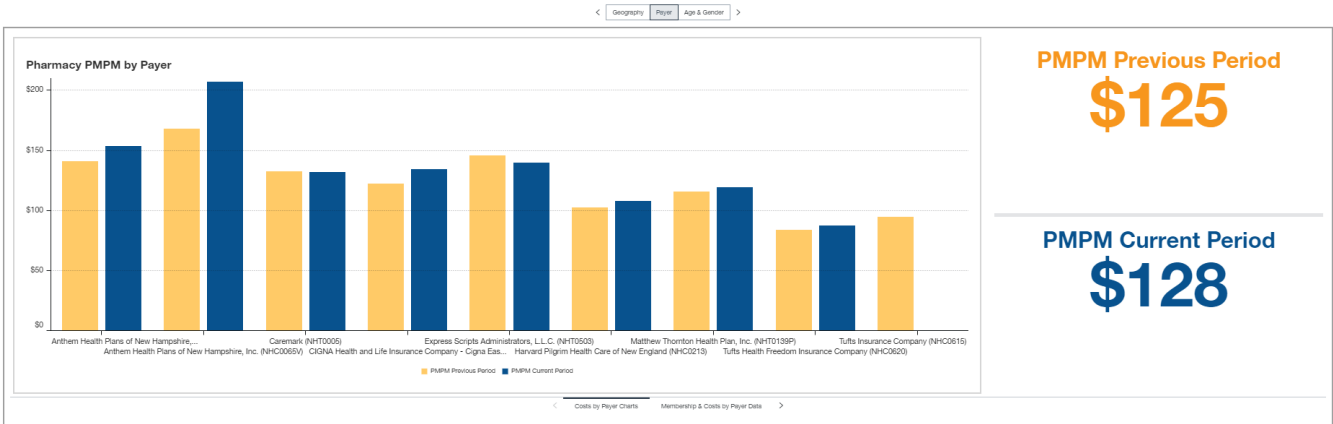
This report uses the following parameters: (Integrated Delivery Network = 1 - Monadnock, Sullivan, Upper Valley) OR (Integrated Delivery Network = 2 - Capital) OR (Integrated Delivery Network = 3 - Nashua) OR (Integrated Delivery Network = 4 - Derry and Manchester) OR (Integrated Delivery Network = 5 - Central, Winnepesaukee) OR (Integrated Delivery Network = 6 - Seacoast and Stafford) OR (Integrated Delivery Network = 7 - North Country and Carroll)



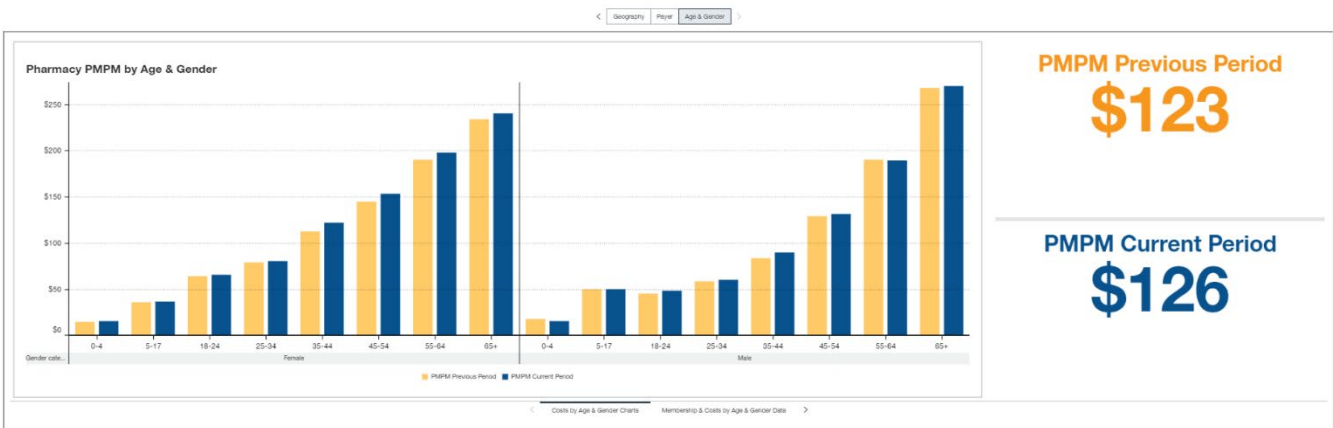
Commercial Overall Pharmacy Costs:



This report uses the following parameters: (Integrated Delivery Network = 1 - Monadnock, Sullivan, Upper Valley) OR (Integrated Delivery Network = 2 - Capital) OR (Integrated Delivery Network = 3 - Nashua) OR (Integrated Delivery Network = 4 - Derry and Manchester) OR (Integrated Delivery Network = 5 - Central, Winnepesaukee) OR (Integrated Delivery Network = 6 - Seacoast and Strafford) OR (Integrated Delivery Network = 7 - North Country and Carroll)

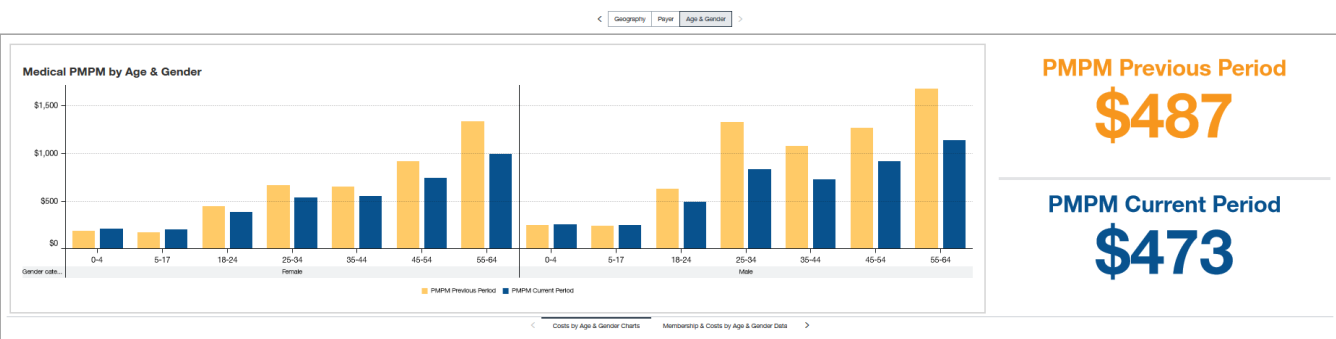
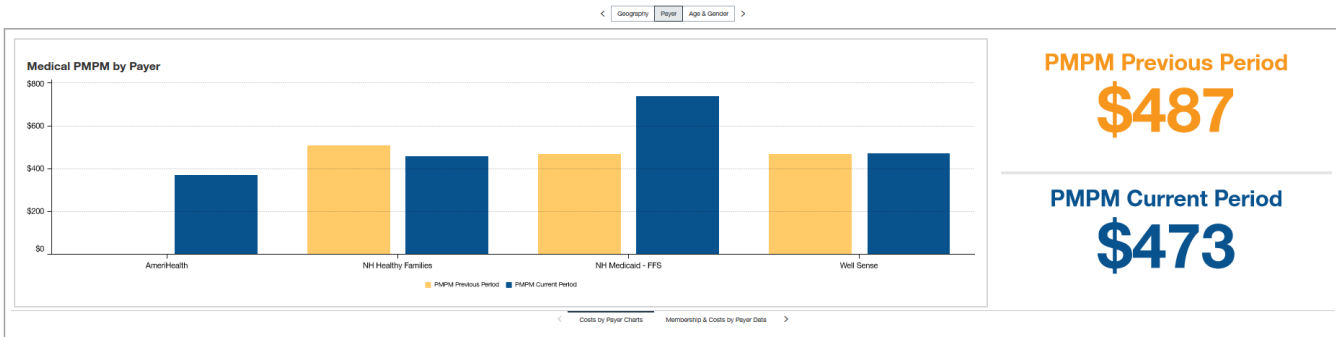
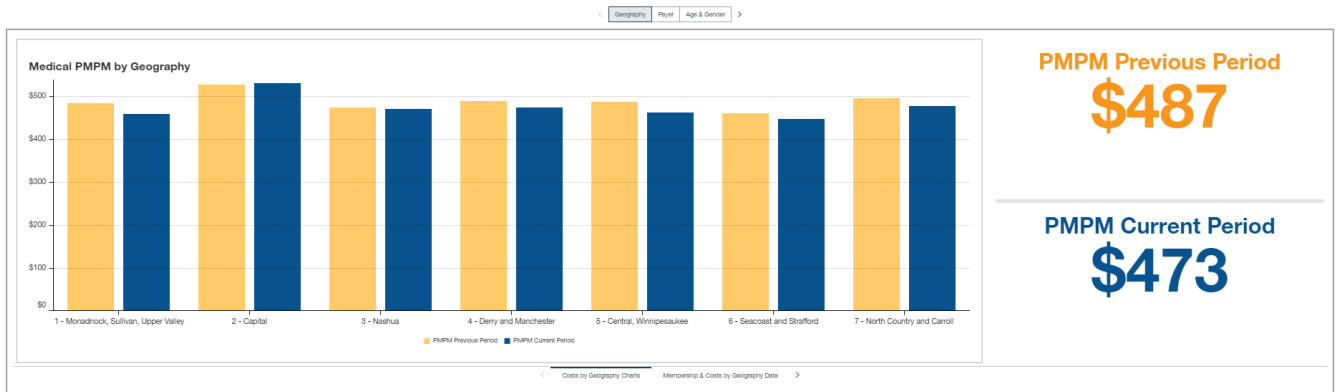


This report uses the following parameters: (Integrated Delivery Network = 1 - Monadnock, Sullivan, Upper Valley) OR (Integrated Delivery Network = 2 - Capital) OR (Integrated Delivery Network = 3 - Nashua) OR (Integrated Delivery Network = 4 - Derry and Manchester) OR (Integrated Delivery Network = 5 - Central, Winnepesaukee) OR (Integrated Delivery Network = 6 - Seacoast and Strafford) OR (Integrated Delivery Network = 7 - North Country and Carroll)



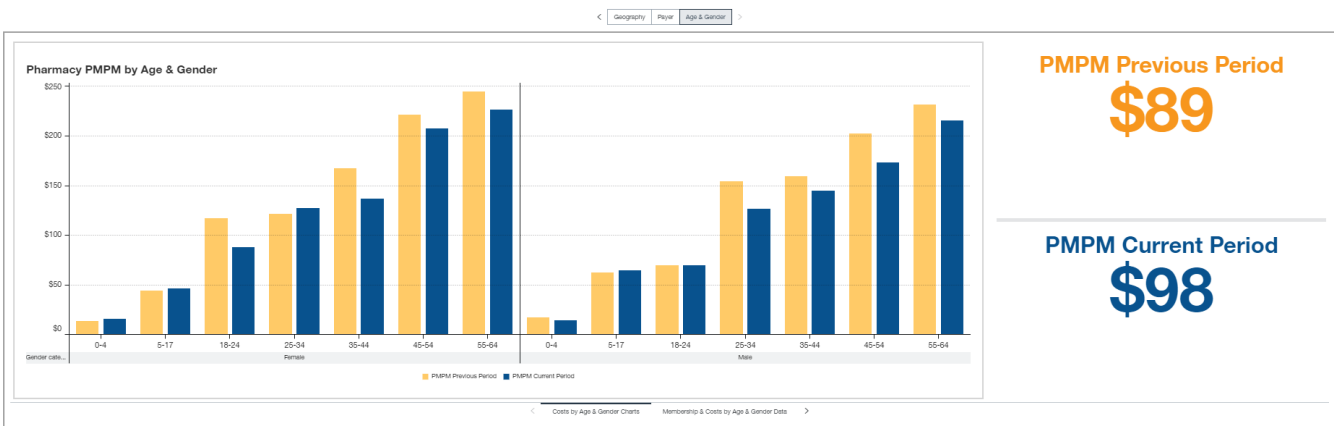
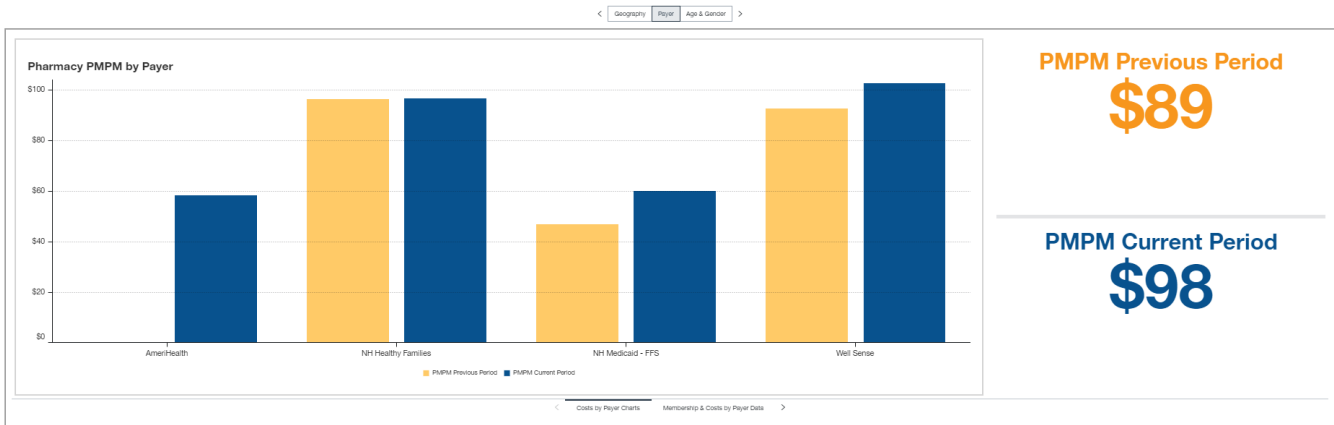
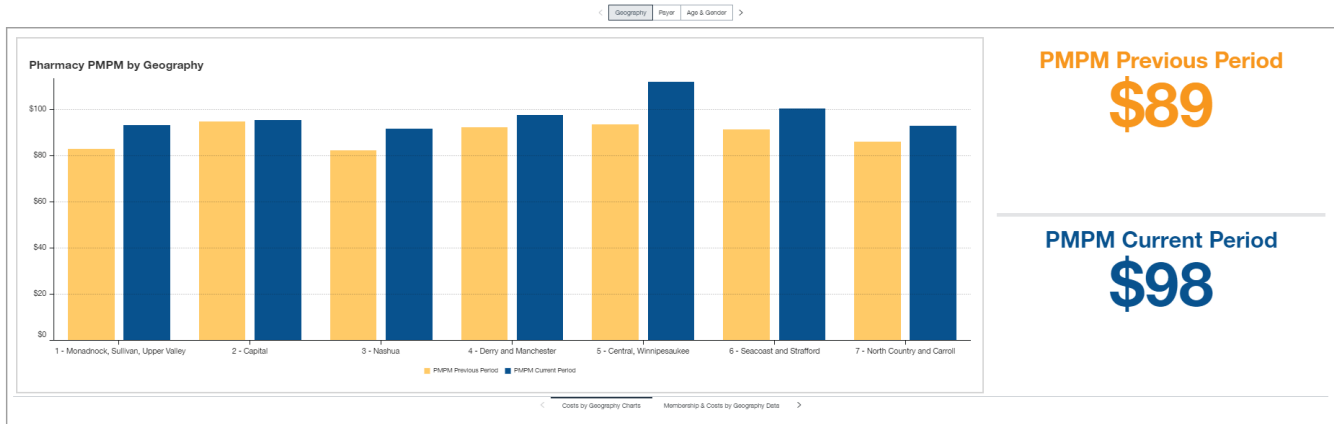


NH Medicaid Overall Medical Costs:



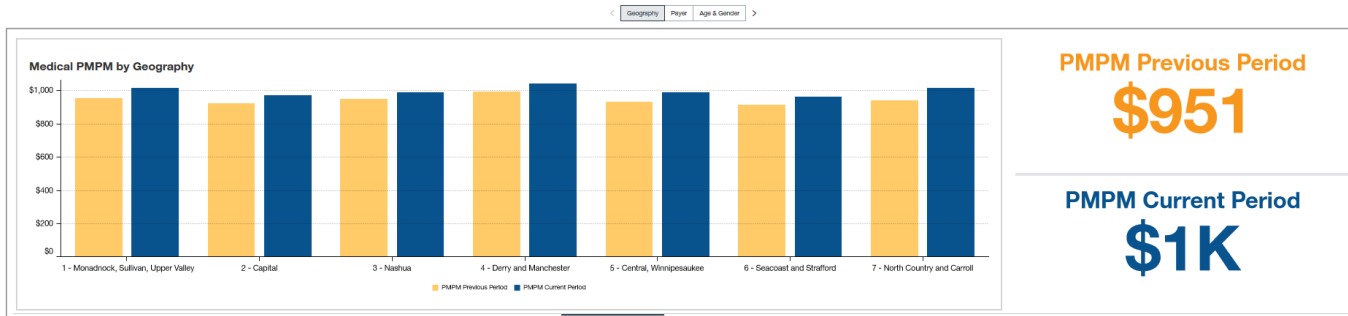


NH Medicaid Overall Pharmacy Costs:



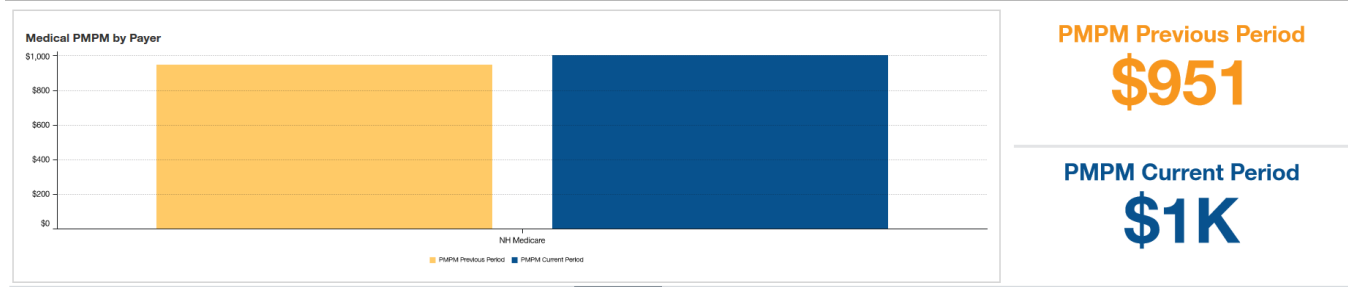


NH Medicare Overall Medical Costs:



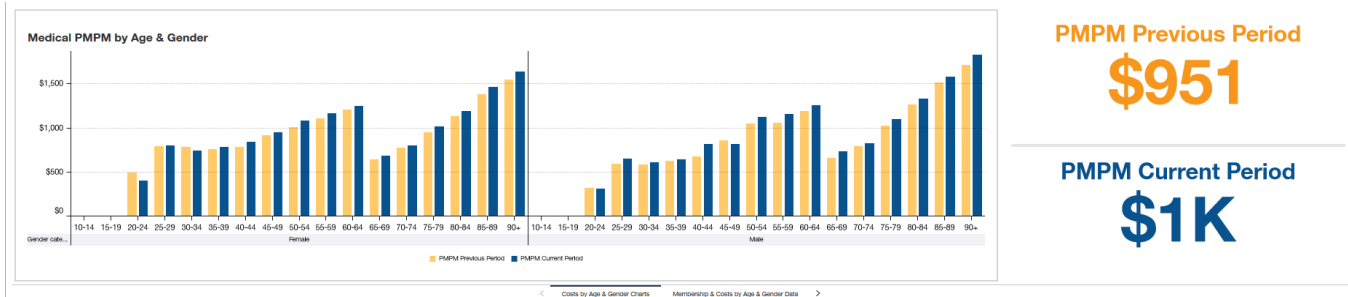
PMPM Previous Period
\$951

PMPM Current Period
\$1K



PMPM Previous Period
\$951

PMPM Current Period
\$1K



PMPM Previous Period
\$951

PMPM Current Period
\$1K



NH Medicare Overall Pharmacy Costs:

