

A Study of NH vs. Out of State Medical Care Spending and Carrier Differences

New Hampshire Insurance Department

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Summary of Findings

Eighty-three percent of medical care dollars paid by commercial health insurance carriers/TPAs and their members to providers stay in New Hampshire (NH). Eleven percent goes to Massachusetts (MA), and another six percent to other states.

According to the diagnosis based risk adjustment system and data used in this study, patients obtaining care in MA are expected to cost thirty percent more per year than average. In many cases, the actual amount is substantially more. Although the results strongly suggest that patients obtaining care in MA are frequently more complex, the study does not attempt to determine whether the same care could have been received in NH, nor does it examine the relative cost for the same procedure between NH and other states.

Most of the major carriers have a similar proportion of members receiving care in NH. The distribution of members receiving care in MA and other states varies between carriers, as does the average cost and health status of the populations.

The negotiated discount from charges that carriers pay for medical care services in NH is frequently less than in MA or other states, and these rates vary extensively among carriers. This suggests that the price of health care would be less outside of NH if the provider charges are similar. The results show that carriers have different claims experience for care received out of state, and that health care received in MA or other states may lead to different financial results for different carriers.

Background

NH has 26 acute care hospitals, including one tertiary level teaching hospital. Several hospitals offer specialized services, and most types of medical care can be obtained within the state. Due to the geographic distribution of the population, provider networks, referral patterns, and other factors, commercially insured members will obtain care out of state. Although a certain percentage of care is assumed to leave the state, very little information available in the public domain answers this question directly.

Purpose

The purpose of this study is to quantify the amount of care provided out of state, and make cost and volume comparisons among carriers regarding the care received by their members outside of NH. The calculation of rates is done to facilitate comparisons among carriers and health status is assessed to better understand the differences in populations obtaining care out of state. This study considers both carrier specific payments and health status for patients receiving care inside and outside of NH, with particular emphasis on MA.

Methodology

Data from the New Hampshire Comprehensive Health Care Information System (NHCHIS) were used for this analysis, based on dates of service during calendar year 2009. Since some of the calculations include both pharmacy data (covered under a prescription benefit) and medical claims, only members with enrollment records in both the medical and pharmacy membership files were used.

Membership numbers in Table F are calculated based on the total number of member months divided by 12. The result is an average membership number for 2009. In tables B and D, membership numbers are used to calculate the percentage of members that are patients. In several cases, the percentage exceeds 100 percent. This is because many patients are only members for part of the year, and can be counted multiple times in the numerator, but not in the denominator. For example, two members enrolled for six months each may be recorded as two patients. However, since they were enrolled for only half the year, they equal one member on an annualized basis. For this reason, the patient percentage of membership calculations should only be used for comparative purposes.

NHCHIS, and this study, include self insured and fully insured members/patients.

In order to gain additional insight about the patients receiving care outside of NH, the populations were compared using the Chronic Illness and Disability Payment System (CDPS). The CDPS is a diagnosis based classification system initially designed so that Medicaid programs could make health based capitated payments for TANF and disabled Medicaid beneficiaries. CDPS is an effective tool for creating a risk score that indicates the difference in expected resources necessary to treat one population versus another. A risk score for population A that is equal to 1.3 vs. a 1.0 for population B shows that the members in population A are expected to cost thirty percent more than those in population B (annually). The risk score is based on the diagnoses made over the period of a year, not during a single encounter.

When the carrier is identified, an average risk score for that carrier can only be compared within that carriers' overall population. So, the risk score for the Harvard Pilgrim Health Care (HPHC) patients receiving care in MA should only be compared to the HPHC patients receiving care in NH and HPHC "Other State" categories. The HPHC average risk score for patients treated in MA cannot be compared to the Anthem average risk score for Anthem patients treated in MA, because the Anthem risk score is exclusively based on the risk of Anthem's patients.

The carrier name is identified for Anthem-NH, HPHC, Cigna (includes Connecticut General Life Insurance), MVP Health Plan, United Healthcare, and Aetna. All other insurance companies are grouped together under "All Other Insurance." In most cases, carrier data is combined so that the product line (e.g. HMO, PPO) is not identified separately.

Rates are calculated so that comparisons can be made between carriers and states. Because patients often receive medical care in more than one state, the same patient is frequently included in multiple state categories. When costs are separated between states (Table B), caution must be exercised to avoid making comparisons between carriers that are based on incomplete data.

Total “allowed” dollars are used. Allowed dollars equal the amount contractually agreed to in payments between the health insurance carrier and the provider. These payments include patient liabilities such as the deductible and coinsurance. Most dollar amounts shown in the tables are for medical claims only, not prescription drug claims, as the location for obtaining prescription medications is less relevant to the study. The results in Table D include prescription drug costs.

Table C includes results based on encounters. An encounter represents a distinct patient encounter with a provider (or providers) in a particular state category, on a single date. If multiple providers in the same state category are seen by the same patient on the same day, one encounter is recorded.

Table D includes results based on claimants. A claimant is a covered member who incurred a medical claim during calendar year 2009. The dollars associated with claimants include both medical and prescription drug costs over the calendar year. The total dollars associated with a particular claimant are averaged with all other claimants in a state category. If the claimant received care from different medical providers in multiple state categories, the claimant’s total claims cost for care received in both states is averaged with all other claimants in the state category for each of the state categories the member is eligible for. If a member incurred a pharmacy claim, but no medical claim, they are excluded from the calculations.

Table D includes two additional columns with only patients who did not have total claims for the year exceeding \$200,000. Patients that exceed this threshold are removed from the calculations. These additional columns are included to show the results when potential “outlier” patients are removed.

Table E shows the discount from charges carriers receive for services provided by medical care providers in the state categories. The discount from charges is calculated by summarizing all charges and all allowed dollars, and calculating the difference as a percent of charges. Since total dollars are used, the rates are weighted by the volume of care provided by the largest providers. For a more in depth study and discussion of discount rates and the methodology, please see the NHID report titled: *Payments to Providers: an inside look at carrier discounts*.

Only members living in NH are included in the analysis.

Detailed Findings

Table A - Overall Results, All Carriers:

Location of Care Provided	Total Allowed Payments*	Percent of Payments	Average Risk Score
MA	\$138,464,969	11%	1.30
NH	\$1,052,530,810	83%	0.90
Other State	\$75,623,414	6%	1.19
Total	\$1,266,619,192	100%	1.00

*Due to the selection of members, the total payments in the study do not represent all claims payments on behalf of NH policyholders in the NHCHIS.

The total payments made to MA providers are eleven percent of the total payments to all providers. Another 83 percent of payments stay in NH. Across all carriers, the patients receiving care in MA are expected to be on average thirty percent more resource intensive, or “sicker” than the average patient. This means we expect the average person who has received care in MA will cost thirty percent more over the period of a year. Likewise, patients included under the NH state category are on average ten percent less resource intensive than the average overall. Patients receiving care in other states have a much higher risk score than for those in NH, but less than for those in the MA category.

Total allowed payments are specific to providers in the corresponding state category, but each patient receives one risk score and the patient risk score may be averaged in multiple state categories.

These findings suggest that patients receiving care in MA or other states have medical conditions that are more complex and/or the patients have more comorbidities than average.

Table B - Carrier Specific Patient Distributions:

Health Insurance Carrier	Location of Care Provided	Average Membership	Patients*§	Patients as a Percent of Membership§	Percent of Allowed Dollars	Payments per Patient	Average Risk Score¶
Anthem - NH	MA	161,556	23,561	15%	10%	\$2,472	1.30
	NH		166,260	103%	85%	\$3,047	0.91
	Other		38,663	24%	5%	\$838	1.21
Totals/Overall Average						\$2,614	1.00
HPHC	MA	95,662	19,552	20%	12%	\$2,053	1.32
	NH		96,064	100%	84%	\$2,949	0.90
	Other		15,096	16%	5%	\$1,011	1.24
Totals/Overall Average						\$2,591	1.00
CIGNA	MA	45,560	13,667	30%	12%	\$1,525	1.23
	NH		46,630	102%	77%	\$2,919	0.87
	Other		25,334	56%	11%	\$743	1.12
Totals/Overall Average						\$2,053	1.00
MVP	MA	20,860	3,512	17%	11%	\$4,343	1.35
	NH		21,114	101%	84%	\$5,382	0.89
	Other		3,704	18%	5%	\$1,870	1.29
Totals						\$4,794	1.00
United Healthcare	MA	217	66	30%	36%	\$4,219	1.37
	NH		220	101%	60%	\$2,098	0.86
	Other		62	29%	4%	\$465	1.12
Totals/Overall Average						\$2,209	1.00
Aetna	MA	404	94	23%	9%	\$2,273	1.08
	NH		354	88%	84%	\$5,528	0.83
	Other		56	14%	7%	\$2,840	1.92
Totals/Overall Average						\$4,622	1.00
All Other Insurance	MA	8,578	818	10%	22%	\$4,267	1.15
	NH		2,462	29%	65%	\$4,234	0.88
	Other		1,000	12%	13%	\$2,038	1.17
Totals/Overall Average						\$3,727	1.00

*The same patient may receive care from providers in multiple states and be counted under multiple rows.

§Distinct patients may be insured for only part of the year, while the average membership reflects the average number of members insured for the whole year. For this reason, the number of patients may exceed the average number of members insured.

¥The risk score in this study can only be used to compare the relative resource needs for populations specific to a carrier across state categories, it cannot be used to compare one carrier's population to another.

Table B Observations:

- Most carriers have about the same portion of members receiving care in NH.
 - Aetna, and particularly All Other Insurance are the anomalies. This may be due to a greater share of individual policies or other market differences.
- Comparing the two largest carriers, Anthem and HPHC, both with a similar percent of members receiving care in NH:
 - Percent of dollars paid to NH providers are about the same.
 - Percent of HPHC patients to MA providers is 33 percent greater than Anthem.
 - Percent of HPHC dollars to MA providers is twenty percent greater than Anthem.
 - HPHC MA payments per patient are 17 percent less than for Anthem, while NH payments per patient are almost equal.
 - Percentage of patients seen in Other states is fifty percent greater for Anthem, while the percent of allowed dollars are similar, and payments per patient are 17 percent less for Anthem.
- Among the major carriers, Cigna has a smallest percentage of allowed dollars to providers in NH, approximately nine percent less for Cigna.
 - The Cigna percent of members to MA providers is similar to United Healthcare, and these two carriers have double the rate of Anthem.
 - Cigna is similar to HPHC and Anthem for the percent of total allowed dollars paid to MA providers, but Cigna payments per patient to MA providers are 26 percent less than HPHC and 38 percent less than Anthem.
 - Compared to the other major carriers, there is a smaller difference in the health status of Cigna patients who receive care in MA vs. NH.
- Variability among all rates is very high for services to providers outside of NH and MA.

Table C – Carrier Specific Encounter Results

Health Insurance Carrier	Location of Care Provided	Encounters*	Percent of Encounters	Allowed Payments per Encounter	Average Risk Score [¥]
Anthem - NH	MA	69,803	5%	\$834	1.30
	NH	1,250,179	88%	\$405	0.91
	Other	97,475	7%	\$332	1.21
Totals/Overall Average		1,417,457		\$421	1.00
HPHC	MA	57,825	7%	\$694	1.32
	NH	682,872	88%	\$415	0.90
	Other	37,836	5%	\$403	1.24
Totals/Overall Average		778,533		\$435	1.00
CIGNA	MA	35,383	8%	\$589	1.23
	NH	321,515	76%	\$423	0.87
	Other	65,461	15%	\$288	1.12
Totals/Overall Average		422,359		\$416	1.00
MVP	MA	9,772	6%	\$1,561	1.35
	NH	134,751	88%	\$843	0.89
	Other	8,038	5%	\$862	1.29
Totals		152,561		\$890	1.00
United Healthcare	MA	279	17%	\$998	1.37
	NH	1,203	74%	\$384	0.86
	Other	141	9%	\$205	1.12
Totals/Overall Average		1,623		\$474	1.00
Aetna	MA	402	11%	\$532	1.08
	NH	3,044	85%	\$643	0.83
	Other	150	4%	\$1,060	1.92
Totals/Overall Average		3,596		\$648	1.00
All Other Insurance	MA	2,813	13%	\$1,241	1.15
	NH	15,405	73%	\$677	0.88
	Other	2,839	13%	\$718	1.17
Totals/Overall Average		21,057		\$758	1.00

*An encounter represents a distinct patient encounter with a provider (or providers) in a particular state category, on a single date.

¥The risk score in this study can only be used to compare the relative resource needs for populations specific to a carrier across state categories, it cannot be used to compare one carrier's population to another.

Table C Observations:

- The distribution of patient-provider encounters is heavier toward care provided in NH than in the Table B, but with similar differences among carriers
- Anthem, HPHC, and MVP have an equal number and strong majority of patient-provider encounters in NH
 - Relatively minor differences in the MA percent of patient-provider encounters exist among these carriers
- The allowed amounts per encounter often reflect the ranking of the risk score when comparing NH to MA (within carrier comparison), but this is not the case when the allowed amount is compared between NH and all other states.
 - The allowed dollars per encounter for services outside NH or MA are lowest among Anthem, HPHC, and Cigna, but the risk scores suggest that the patients receiving care outside NH and MA on average have a higher risk score than those receiving care in NH
 - The relative risk scores for MVP, United, Aetna, and “all other insurance” for members treated outside of NH or MA is consistent with those for Anthem, HPHC and Cigna, but the average allowed per encounter is higher than for encounters in NH

Table D – Carrier Specific Claimant Results

Health Insurance Carrier	Location of Care Provided	Patients* \$	Patients as a Percent of Membership \$	Allowed Payments per Claimant	Claimants <\$200k	Allowed Payments per Claimant <\$200k	Average Risk Score [¥]
Anthem - NH	MA	23,561	15%	\$8,663	23,493	\$7,751	1.30
	NH	166,260	103%	\$4,391	166,142	\$4,162	0.91
	Other	38,663	24%	\$7,068	38,595	\$6,485	1.21
Totals/Overall Average				\$5,285	228,230	\$4,924	1.00
HPHC	MA	19,552	20%	\$9,216	19,494	\$8,297	1.32
	NH	96,064	100%	\$4,437	96,001	\$4,237	0.90
	Other	15,096	16%	\$8,706	15,062	\$7,977	1.24
Totals/Overall Average		130,712		\$5,645	130,557	\$5,274	1.00
CIGNA	MA	13,667	30%	\$9,391	13,623	\$8,450	1.23
	NH	46,630	102%	\$5,044	46,584	\$4,744	0.87
	Other	25,334	56%	\$6,935	25,290	\$6,401	1.12
Totals/Overall Average		85,631		\$6,297	85,497	\$5,824	1.00
MVP	MA	3,512	17%	\$14,599	3,478	\$11,467	1.35
	NH	21,114	101%	\$7,039	21,062	\$6,259	0.89
	Other	3,704	18%	\$14,748	3,673	\$12,124	1.29
Totals/Overall Average		28,330		\$8,984	28,213	\$7,665	1.00
United Healthcare	MA	66	30%	\$8,359	66	\$8,359	1.37
	NH	220	101%	\$4,000	220	\$4,000	0.86
	Other	62	29%	\$7,627	62	\$7,627	1.12
Totals/Overall Average		348		\$5,473	348	\$5,473	1.00
Aetna	MA	94	23%	\$14,333	93	\$7,955	1.08
	NH	354	88%	\$7,598	353	\$5,898	0.83
	Other	56	14%	\$26,454	55	\$15,890	1.92
Totals/Overall Average		504		\$10,949	501	\$7,377	1.00
All Other Insurance	MA	818	10%	\$13,970	813	\$12,544	1.15
	NH	2,462	29%	\$7,705	2,454	\$6,887	0.88
	Other	1,000	12%	\$11,655	993	\$9,869	1.17
Totals/Overall Average		4,280		\$9,826	4,260	\$8,662	1.00

*The same patient may receive care from providers in multiple states and be counted under multiple rows.

§Distinct patients may be insured for only part of the year, while the average membership reflects the average number of members insured for the whole year. For this reason, the number of patients may exceed the average number of members insured.

¥The risk score in this study can only be used to compare the relative resource needs for populations specific to a carrier across state categories, it cannot be used to compare one carrier's population to another.

Table D Observations:

- The cost per claimant receiving care outside of NH is often double the amount per claimant when care is received exclusively within NH
- For the majority of carriers, the average cost per claimant is highest when the patient receives care in MA. Likewise, the cost per claimant is higher than the NH rates when care is received outside of NH or MA.
- The relative ranking of the population risk score is consistent with the ranking of the average cost per claimant.
 - The difference between risk scores within carrier comparisons does not reflect the magnitude of the observed differences among per claimant costs.
- The average per claimant cost is the lowest for Anthem, with a few exceptions: Cigna – patients receiving care outside NH or MA (both with, and without outliers removed), and United HealthCare – MA claimants with outliers removed, and United Healthcare – NH exclusive claimants.
 - The overall average cost per claimant is lowest for Anthem

Table E – Medical Claim Discount Rates

Health Insurance Company	Insurance Type	Total Payments	Overall Discount	NH Providers	MA Providers	Other State Providers
Anthem - NH	HMO	\$337,111,110	40%	40%	39%	40%
Harvard Pilgrim HC		\$233,336,373	43%	42%	48%	30%
MVP		\$447,875	36%	37%	17%	28%
Aetna		\$2,329,473	29%	27%	42%	29%
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Anthem - NH	POS	\$45,217,122	40%	40%	38%	37%
CIGNA		\$20,819,125	27%	27%	29%	27%
Harvard Pilgrim HC		\$11,468,781	38%	37%	48%	31%
United Healthcare Insurance Company		\$768,784	39%	39%	35%	56%
All Other Insurance		\$2,972,999	34%	27%	49%	45%
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Anthem - NH	PPO	\$212,331,855	36%	33%	44%	47%
CIGNA		\$144,751,721	34%	34%	34%	36%
Harvard Pilgrim HC		\$93,844,300	33%	31%	50%	27%
MVP		\$135,365,175	32%	31%	39%	32%
All Other Insurance		\$10,379,732	25%	24%	26%	31%
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Anthem - NH	Indemnity	\$2,647,582	26%	22%	31%	41%
All Other Insurance		\$2,599,387	20%	14%	26%	26%

Note: Cigna HMO data are not included due to a potential data integrity issue that is currently being investigated.

Table E Observations:

- Comparable MA discounts exceed NH discounts in almost seventy percent of the categories.
- Comparable Other State discounts exceed NH discounts in fifty percent of the categories.
- Anthem-NH has slightly steeper discounts in NH for HMO and POS product lines, but substantially better discounts out of state with PPO and Indemnity products.
- HPHC has discounts in MA are equal to or better than those in NH. This is not the case for HPHC when NH discounts are compared to discounts in Other States.
- Cigna has fairly comparable discounts regardless of the provider location.
- In most cases, the other smaller insurers have the weakest discounts in NH.

Table F – Carrier Membership

Health Insurance Carrier	Average Membership
Anthem - NH	161,556
Harvard Pilgrim HC	95,662
CIGNA	45,560
MVP	20,860
Aetna	404
United Healthcare Insurance Company	217
All Other Insurance	8,578

Limitations

The NHCHIS includes only patients who are insured under a NH policy, and does not include most residents who obtain their health insurance through an employer out of state. Due to their working location, these NH residents obtaining insurance from an out of state policyholder are potentially more likely to obtain care out of state. At this time, it is impossible to test this assumption.

This study focuses on the differences between carriers, but the geographic distribution of insured members statewide varies between carriers. A carrier with a disproportionate number of members on a state border is likely to have a greater number of members obtaining care out of state.

Many of the rates in the report only use members that incur claims. Differences in these rates may suggest a corresponding profitability for a carrier. There are many factors that affect the financial profitability of a carrier and adjusting for those factors was not done in this study.

None of the calculations specifically adjust for the age and gender of covered members. The CDPS system considers age with diagnosis when relevant.

Discount rates assume that a carrier's membership uses different providers in exactly the same proportions, and this is unlikely to be true, particularly for out of state providers.

In most cases, all of a carrier's product lines are combined for the analysis. The patient populations and contract payment levels are likely to vary between products. Therefore, the results of this analysis may not reflect the unique nature of any specific carrier subpopulation.

The risk adjustment system is a population based risk adjustment system and the results will never correlate perfectly with costs. As with all population based risk adjustment systems when measuring at the individual level, the CDPS tends to under predict for the sickest patients and over predict for the healthiest.

At the time of this analysis, a complete run out period for claims was not available. This means not all claims costs that have been incurred during 2009 are included.

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