Experience under the Healthy Indiana Plan: The short-term cost challenges of expanding coverage to the uninsured

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After a year of operation, an Indiana program providing health coverage for the uninsured has produced experience that illustrates an important dynamic as the nation seeks a way to ensure the healthcare of all Americans. Utilization, cost, and morbidity data from that first year tell a significant story about the anti-selection that can occur in healthcare. Specifically, the uninsured may be unexpectedly expensive in at least the first several months after they receive coverage, especially in an environment without an individual mandate. This dynamic may help inform broader attempts to provide healthcare for the uninsured.

Some context is necessary before examining the data. The Healthy Indiana Plan (HIP) is a Medicaid expansion program operating under a federal waiver to cover individuals who are uninsured and do not qualify under Indiana Medicaid rules. It includes two populations–caretakers and non-caretakers–that are serviced by contracted HMOs. A third group, the Enhanced Services Plan (ESP), covers several hundred high-risk individuals. Generally speaking, HIP applies to those with incomes up to 200% of the federal poverty level (FPL).

The program has several features that distinguish it from standard Medicaid coverage. Enrollees need to have been uninsured for at least six months, and once someone leaves the HIP, they are not again eligible for 12 months. Because Indiana does not have an individual mandate, there is no obligation for participation–the HIP is a voluntary program. Payment of a monthly contribution is required, with penalty consequences for nonpayment of contribution during a 12-month period of coverage; contribution amounts are scaled by family income level–from 0% for families with no income, to 2% of income for families at 100% of the FPL, to 5% at 200% of FPL. Benefits entail a $1,100 annual deductible, paid through a special HSA-style account that is funded by a combination of the enrollee's contributions plus state-advanced HIP funds; unused account balances can be carried forward year to year and used subsequently as an offset against enrollee contributions.

By the end of the first 12 months of the program, the Healthy Indiana Plan provided coverage to more than 35,000 previously uninsured individuals in the state of Indiana. This represents an estimated take-up rate of between 5% and 10% of eligible uninsured individuals. Without the program, many of these individuals may not have had any coverage and may have forgone needed healthcare services. The design of the Healthy Indiana Plan is intended to provide healthcare coverage for the chronic healthcare needs of the population, while also encouraging the use of preventive care services and personal responsibility through the use of an HSA-style POWER account.

HIP'S UNINSURED POPULATIONS: CARETAKERS AND NON-CARETAKERS

Caretakers are individuals–either parents, grandparents, or other guardians–who have qualifying children in their homes. Qualified children are eligible for Medicaid or the Children's Health Insurance Plan (CHIP).

Why do caretakers not already have health coverage? Medicaid's coverage for children is offered to families at up to 150% of FPL. CHIP is offered at up to 200% of FPL. But for an adult, Medicaid in Indiana only covers up to 22% of FPL. If a family's income is somewhere between 23% and 200% of FPL, the children qualify but adults do not. As of June 2009, there were between 15,000 and 20,000 such caretakers covered by HIP.

Non-caretakers are adults who do not have any children residing with them and are not responsible for any children. Non-caretakers include a higher proportion of those over age 50 who lack health insurance coverage. As of June 2009 there were between 25,000 and 30,000 non-caretakers covered in the HIP program.

Both caretakers and non-caretakers are eligible for the ESP, which covers the highest risks. The ESP program was designed to cover the 1% of the eligible population with the highest risk.

RELATIVE UTILIZATION OF COVERED POPULATIONS

Milliman analyzed utilization of services during the first year of enrollment. We compared the HIP plan to a comparable commercially insured population and we looked at six key utilization statistics.

What did we find? In short, the HIP population used more care than the typical commercial population in Indiana with the same age/gender characteristics. Consider the annual rate of utilization per 1,000 for adult caretakers compared to that of the commercial population, seen in Figure 1 (on page 2). The data suggests that the caretaker utilization was much higher, especially with inpatient and ER visits.

FIGURE 1: COMPARISON OF HIP TO COMMERCIAL UTILIZATION

ANNUAL UTILIZATION PER 1,000 POPULATION

CATEGORY OF SERVICE	HIP CARETAKERS	COMMERCIAL POPULATION	RATIO OF CARETAKERS TO COMMERCIAL
INPATIENT HOSPITAL DAYS	309	224	138%
PRESCRIPTION DRUGS/OTC DRUGS	20,744	16,273	127%
OFFICE VISITS/CONSULTS	4,727	3,971	119%
PHYSICAL EXAMS	471	405	116%
HOSPITAL INPATIENT VISITS	346	207	167%
EMERGENCY ROOM VISITS	719	256	281%

Note: Commercial data from Milliman Health Cost Guidelines™ adjusted for age/gender mix.

Now consider the HIP non-caretakers, seen in Figure 2.

FIGURE 2: COMPARISON OF HIP TO COMMERCIAL UTILIZATION

ANNUAL UTILIZATION PER 1,000 POPULATION

CATEGORY OF SERVICE	HIP NON-CARETAKERS	COMMERCIAL POPULATION	RATIO OF NON-CARETAKERS TO COMMERCIAL
INPATIENT HOSPITAL DAYS	839	329	255%
PRESCRIPTION DRUGS	31,406	21,895	143%
OFFICE VISITS/CONSULTS	5,396	4,541	119%
PHYSICAL EXAMS	317	389	81%
HOSPITAL INPATIENT VISITS	970	289	336%
EMERGENCY ROOM VISITS	927	251	369%

Note: Commercial data from Milliman Health Cost Guidelines adjusted for age/gender mix.

The difference is even more pronounced in this population. The non-caretakers had nearly three times as many inpatient services per capita as compared with a commercial population. Pharmacy utilization was nearly 50% higher than a typical commercially insured population.

RELATIVE MORBIDITY OF COVERED POPULATIONS

A tool called Medicaid Rx, developed by researchers at University of California, San Diego (UCSD),[1] was used to quantify the relative morbidity, or health risk, of each enrolled member in HIP. This tool is helpful in illustrating the risk and cost characteristics of the HIP population.

To understand how Medicaid Rx works, consider the example of a 44-year-old male. Medicaid Rx will assign a ratio measuring his morbidity based on prescriptions filled and filed under the program. That ratio depends on a number of factors. First, he is assigned a basic risk ratio depending on his gender and age. If his prescription history indicates he has diabetes, he gets a 0.58 risk score added; if he has depression, he gets 0.252 added; and so on, for as many as 45 different condition classifications. We can identify an individual's risk in this manner, and we can also calculate the morbidity of the entire population. Consider how the HIP population compared to a typical commercial population, seen in Figure 3.

FIGURE 3: RISK SCORE RELATIVE TO COMMERCIAL POPULATION

POPULATION	RELATIVE MORBIDITY
CARETAKER	1.25
NON-CARETAKER	1.65
COMMERCIAL	1.00

The values in this figure normalize Medicaid Rx risk scores to a typical adult commercial population. This analysis normalizes all data, including age and gender variation, by applying Medicaid Rx to the Thompson Reuters MarketScan® database to establish the distribution of disease classes for the commercial population.

[1] For more on Medicaid Rx, go to http://medicaidrx.ucsd.edu/.

Caretakers had a 25% higher risk-adjusted relative morbidity than a typical commercial population. Non-caretakers had an even higher relative morbidity at 65% greater than a commercial population. Note that, for both caretaker and non-caretaker populations, these are the observed relativities for the early durations of a new program, and that in some cases a full year of data was not yet available. Results have been normalized when a full year's data was not available. Actual experience may reveal lower morbidity as more people enroll. Also note that the results would be potentially different in a strong individual mandate environment.

In many cases, risk scores are higher because the HIP patients had multiple illnesses and patients had a higher frequency of certain diseases. Consider the disease frequency, seen in Figure 4, among our three populations for eight of the more common disease classifications.

FIGURE 4: DISEASE FREQUENCY AMONG THREE POPULATIONS

	HIP		
MRX DISEASES	CARETAKERS	NON-CARETAKERS	COMMERCIAL
ASTHMA/COPD	12.7%	17.4%	7.4%
CARDIAC	20.4%	36.8%	21.7%
DEPRESSION/ANXIETY	30.8%	32.5%	17.2%
DIABETES	6.4%	12.3%	5.6%
HYPERLIPIDEMIA	10.1%	20.1%	14.2%
PAIN	41.6%	45.4%	22.4%
SEIZURE DISORDERS	8.0%	12.1%	3.6%
NO MRX CATEGORY	21.9%	20.4%	33.9%

This analysis normalizes all data, including age and gender variation, by applying Medicaid Rx to the Thompson Reuters MarketScan database to establish the distribution of disease classes for the commercial population.

Asthma was twice as prevalent in the HIP populations. Cardiac cases were more prevalent among the non-caretakers. Incidences of depression were twice as frequent for both HIP populations.

Also note the *No MRX Category*—these are the individuals without a Medicaid Rx score. Likely they are not taking any drugs. This may imply that, among HIP populations, only 20% of the population was healthy compared to 34% of the commercially insured population.

MULTIPLE COMORBIDITIES AND HEALTH RISKS

So far, we have presented only the frequency of particular health risks. Each incidence of these conditions, along with any other conditions that the enrollee may have, has expected costs associated with it. Figure 5 illustrates the relative morbidity risk for all conditions for members within a specific Medicaid Rx disease category.

FIGURE 5: RELATIVE MORBIDITY INDICES FOR SELECTED CONDITIONS

	HIP		
MRX DISEASES	CARETAKERS	NON-CARETAKERS	COMMERCIAL
ASTHMA/COPD	2.02	2.46	1.73
CARDIAC	2.01	2.33	1.84
DEPRESSION/ANXIETY	1.70	2.14	1.71
DIABETES	2.29	2.73	2.36
HYPERLIPIDEMIA	2.03	2.46	1.87
PAIN	1.82	2.30	1.82
SEIZURE DISORDERS	2.87	3.30	2.97
NO MRX CATEGORY	0.28	0.29	0.29

Note that these indices have not been normalized to make commercial equal to 1.0; thus, they are useful for comparing relative costs among enrollees with these conditions, measuring the effects of any comorbidities present, but they should not be compared to the risk scores presented earlier in this paper.

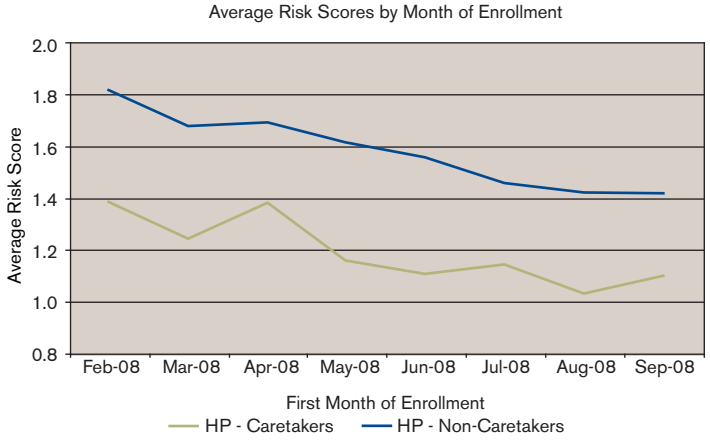
Note how the different conditions produce varying morbidity indices among the three populations. For example, those individuals with asthma in the commercial population had a cumulative morbidity index of 1.73 but the HIP caretakers had an index value of 2.02, which is 17% higher. This indicates that the HIP population with this condition has a 17% higher expected claims cost, reflecting multiple conditions that may be present in the enrollees with this condition.

ILLUSTRATING ANTI-SELECTION BY THE EARLIEST ENROLLEES

We have examined the health status and general utilization of the HIP population. Now we will examine characteristics of this population as it enrolled during the first year and how enrollees used care over the course of their initial year of coverage. Their enrollment timing and utilization patterns may help to clarify how and when the uninsured seek coverage and use care in a non-mandated environment.

First, consider that those with the highest risk score were the first to enroll, as seen in Figure 6.

FIGURE 6: AVERAGE RISK SCORES BY MONTH OF ENROLLMENT



HIP started in January 2008. In the first month there were very few people enrolled, so January numbers are not significant. But, starting in February, very meaningful numbers of people were enrolled. We charted those who enrolled in February, tracking their eventual risk scores. We did the same for each subsequent month of enrollees, tracking each group of new enrollees for the first six months and measuring their Medicaid Rx risk scores. Figure 6 shows that among those who enrolled in the first three to four months of HIP, caretakers had an average risk score ranging from 1.2 to 1.4; non-caretakers had a score between 1.6 and 1.8. Starting in May, June, July, and August, new enrollees were not as high risk or expensive, with risk scores 20% lower; the difference in health status primarily drove the decreased risk and cost.

What does this tell us? The first to enroll in this voluntary program had higher morbidity, with relatively healthier people enrolling a bit later.

ILLUSTRATING COST PATTERNS DURING INITIAL PERIOD OF ENROLLMENT

The HIP populations also followed a particular pattern of utilization during the initial enrollment period. Figures 7 and 8 show measurements of inpatient, outpatient, pharmacy, and physician expenditures relative to average PMPM costs, first for caretakers and then for non-caretakers. The 100% line measures the average PMPM for the first year of coverage for the population represented.

In the first month of enrollment, people did not receive much care under the program; the PMPM cost levels are below the first-year average for all categories except for outpatient hospital services, which is driven to a large degree by emergency room services. Then, once they had been enrolled for a short while, these populations began to incur relatively more inpatient and outpatient costs, with PMPM levels spiking during the second and third months.

The inpatient and outpatient trends deserve closer examination. The HIP populations used significant levels of hospital care near the outset. Then the inpatient cost decreased in the seventh to ninth months of enrollment. Outpatient costs dropped even sooner, after the third month.

Both populations took a bit longer to begin incurring pharmacy costs, with a steady increase throughout the initial nine months of enrollment. This pattern of behavior was generally repeated by both caretakers and non-caretakers.

CONCLUSION

Anti-selection in healthcare describes, in general terms, the results that occur from the financial behavior of the highest-risk, most expensive people in seeking healthcare coverage that is available to them. The people who create anti-selection for a healthcare plan include those with serious chronic conditions, individuals with immediate near-term medical treatment needs, and those with pent-up demand for services that have been deferred for financial or other reasons. Access to coverage is of great value to such individuals, compared to the perceived value of coverage for someone without known acute or chronic care needs, and they are more likely to enroll in a newly available program. This is especially true if they do not currently have realistic access to coverage or if they have to pay a premium for such coverage out of limited income. A consequence of anti-selection is higher cost levels than would be experienced by the population at large.

The presence of anti-selection in HIP can be seen clearly from the program analysis and results presented here. Utilization levels for HIP enrollees were significantly higher than for a typical commercial population (after adjusting for differences in age/gender mix).

FIGURE 7: CARETAKERS

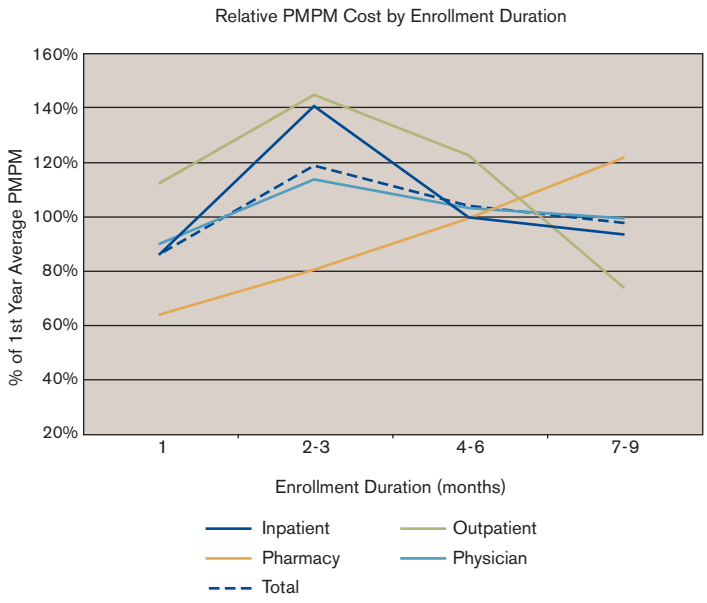
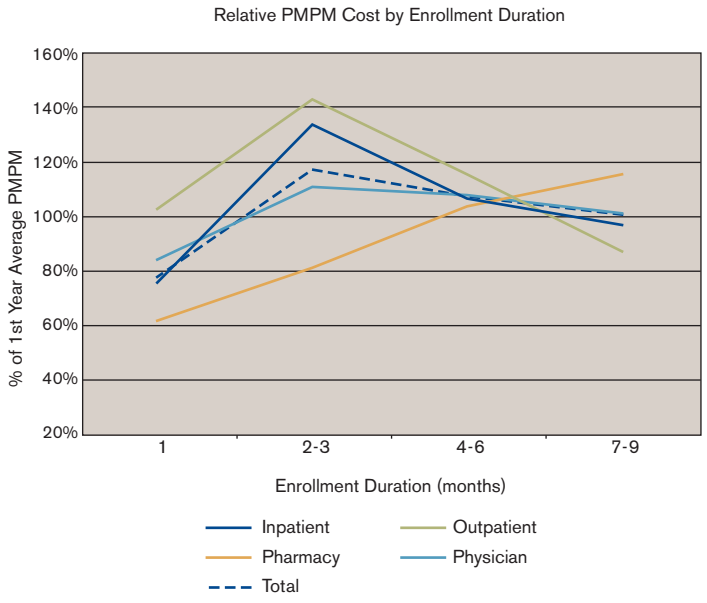


FIGURE 8: NON-CARETAKERS



Likewise, risk scores based on prescription medications used were also higher. At a patient level, the frequency of certain diseases or medical conditions was higher among HIP enrollees than in the general commercial population, as were their morbidity indices, which capture the expected costs of treating these conditions and any other conditions present (or comorbidities). The initial experience under HIP also shows that those individuals who enrolled earliest had the highest average risk scores, suggesting the most severe anti-selection at the very beginning of the program; and the spiking of costs that occurred during the second and third months of coverage suggest either an especially high level of immediate needs near the time of enrollment or pent-up demand for care.

The design of any approach to covering the uninsured should take into account these forms and patterns of anti-selection. Anti-selection can be expected in a purely voluntary environment with no constraints on enrollment other than a lack of coverage and the requirement for member contributions or premium payments. Further, the earliest to enroll are likely to be those who need coverage the most due to the existence of chronic conditions, the need for immediate medical care, or the presence of conditions for which services have been deferred. Based on HIP's experience, such a population is likely to incur above-average costs associated with both inpatient and outpatient services at the outset, and will experience gradually increasing pharmacy drug costs.

One feature of the Healthy Indiana Plan that was not addressed in the research is the HSA-style POWER account used to pay an enrollee's deductible and how personal responsibility eventually influences the use of healthcare services. Given that the program has been operational for fewer than 18 months, it is too early to measure the consumerism portion of the program.

Several important, related questions are not addressed by this analysis, nor can they be addressed from the data available:

- How would the cost, utilization, and morbidity of these populations have differed if there had been an individual mandate that required everyone who was eligible to participate? Presumably, one of the reasons why some individuals did not apply for HIP was because they believed themselves to be healthy and not in need of coverage at the contribution levels required under the program.
- What ultimate level of utilization might we expect from these initial enrollees? Will the anti-selection exhibited in the initial period of their enrollment diminish over time?
- Will the early enrollees stay enrolled? Will the HIP 12-month waiting period for re-enrollment following early termination prevent gaming of the system (i.e., enrolling only long enough to receive needed care, terminating, then re-enrolling when care is needed again)?
- What take-up behavior might we expect in the future from those uninsured who have yet to enroll?
- How should a plan designed to cover the uninsured under a voluntary system structure its pricing and financing to account for the likely dynamics of anti-selection?
- How should providers handle the wave of new utilization resulting from such coverage, and how should they manage the care of their newly insured patients?

Hopefully, despite the absence of experience data to address these questions directly, sound thinking and judgment will inform the coming debate over how to approach providing coverage to the uninsured.

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