



HEALTH CARE
COST INSTITUTE

2018-2019 Healthy Marketplace Index

Frequently Asked Questions

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General Questions

How is a metro area defined?

We used Core Based Statistical Areas (CBSAs), as identified by the Office of Management and Budget, to define our metro areas.

How were the sample metro areas chosen? For example, why are there so many data points in areas like Florida but so few in New York?

To be included in the HMI, a CBSA had to have a minimum average of 25,000 member years and 10% coverage of the ESI population within the HCCI data. See the [methodology document](#) for greater detail.

What constitutes an inpatient, outpatient, or professional service?

Inpatient services are rendered to patients who are kept in a health care facility overnight for treatment but not for observation.

Outpatient services are rendered to patients by sections of a hospital that provide medical services not requiring an overnight stay or hospitalization (e.g., emergency room [ER], outpatient surgery, observation room).

Professional services are rendered to patients by a health care professional. Service claims with no valid revenue code are assumed to be professional services (e.g., office and preventative visits, administered drugs).



Price Index Questions

What does “prices” mean?

We define “prices” as the allowed amount paid for a health care service. The allowed amount is the total payment from both the insurer and the patient to a health care provider.

How are “prices” used to compute the “price level”?

Using the prices paid for health care services in each CBSA, we calculate a measure of the average price paid for a representative health care service within each service category. We then calculate the “price level” by comparing this measure to the national average.

For a more comprehensive description of how we calculate the measures used in our report, see [our methodology document](#).

Are differences in prices due to people receiving different services across areas?

When calculating our measure of the average price paid for a representative health care service, we hold the set of services and the amount of each service used constant across areas. In other words, our measure is designed to compare the prices an individual would face for the same basket of health care services in each metro area.

Are differences in prices due to the fact that people may be sicker and therefore requiring more expensive procedures in different areas?

We standardized our sample across areas in several ways to limit the degree to which differences in CBSA populations were influencing the computed price measures. First, we studied the same population in each area: individuals under the age of 65 with employer sponsored insurance, non-individual coverage with one of the following plan types: Health Maintenance Organization, Preferred Provider Organization, Point of Service Plan, or Exclusive Provider Organization. We also standardized the service basket for which we calculated our average price measure across areas (see above). Further, we excluded claims with extreme costs or lengths of stay from our analysis.

Consequently, our analysis compared the prices paid for the same set of services for largely similar populations across areas. That said, it is possible that underlying health differences of different CBSAs are one among many local factors that affect variation in health care prices.



Are the prices based on where I live or where I receive care?

Prices are based on where patients receive their care.

Health care prices in my metro area were above the national average. Why might this have been the case?

Health care prices are dependent on a number of local factors (e.g., cost of living, demand for health care services, health care provider market structure, health insurer provider market structure, etc.). Our price index is not meant to unpack why prices may be high or low. Subsequent releases will provide more information on commercial health care markets that can help unpack the factors which may be influencing price.

Health care prices in my metro area were below the national average. Does this mean there were low health care prices in my area?

Not necessarily. Comparing a metro to the national average simply tells you how high (or how low) that metro's prices were on the distribution of prices at that time. It could be the case that all prices across all metros were high (or low).

Diving further into our Price Index data, we found that, regardless of their relation to the national average, health care prices were dramatically more expensive in 2016 than in they were in 2012 almost everywhere. While an area might have below average prices in 2016, those prices were on average 16% higher than they were just a few years before. For a more in-depth explanation, check out our Healthy Bytes Healthy Marketplace Index (HMI) [blog post](#).

Price levels and growth rates are often compared in this report. What is the difference between these two measures?

Price levels compare the prices of different CBSAs within one year, in this case 2016. Growth rates compare the price level of the same CBSA over time; most often we report the growth rate between the first and last year of our study (2012 and 2016).



Use Index Questions

What does per-person “use” mean?

We define use as the total number of services used per-person.

How are “use” rates used to compute “use levels”?

Using data on how many services are performed for each type of service in each CBSA, we calculate the use index as a weighted average of per-person use rates across a common set of services. We define the weights based on the share of total spending accounted for by each service in our base year, 2012. For a more complete description see the methodology document.

For a more comprehensive description of how we calculate the measures used in our report, see [our methodology document](#).

How should we interpret the use level of a metro?

Let’s say the overall use level of a metro is 20% above the national median. This means that on average, providers in that metro performed 20% health care services than the providers in the median market.

Is use measured based on a member’s residence or site of care?

We measure use based on where a service was performed or, in other words, the metro in which the provider was located.

What factors may relate to high use?

High use may result from a variety of factors relating to both the supply of and demand for health care services. For example, a place may have high use due to underlying population health characteristics, a large number of providers, or aggressive provider practice patterns to name a few.



Can overall use levels reflect the fact that some metros use different services than others?

Yes, across the metros in our study, overall use levels are the result of different use levels within metros across service categories. We also see that metros can have different changes in use levels by service category over time. You can explore these trends and more using the dashboard in our interactive report comparing use levels across metros.

Within a service category, does variation in use levels reflect the fact that some metros use different services than others?

Yes, it is possible that to some extent variation in service category use levels across CBSAs reflects variation in which services CBSAs use. To illustrate this possibility, consider an example where we have two CBSA's A and B. Let's say CBSA A appears to have relatively lower professional service use based on our index compared to CBSA B. Let's say that the same number of total professional services are performed in CBSA's A and B. But, CBSA A uses 100 fewer of a particular service that is heavily weighted when we compute our index and 100 more of a less heavily weighted service than CBSA B. Let's further assume that otherwise CBSA's A and B have identical service use. In this case, CBSA A would have a lower professional use index value than CBSA B even though they use the same number of total professional services. In other words, CBSA A's lower professional use index value is driven by the fact that they use different services than CBSA B.

However, when we look at the data, it appears that across the CBSAs in our sample there is minimal variation in the mix of services within each service category. To see this, we measured the correlations between the proportion of total services accounted for by each sample service in each CBSA in 2016 and the proportion of total services accounted for by each sample service nationally in 2012 (Table 1).

Table 1: Distribution of Correlation Coefficients between the Percent of Total Services Accounted for by Each Sample Service in Each CBSA in 2016 and Nationally for Each Sample Service in 2012

Service Category	Min	5 th Percentile	10 th Percentile	25 th Percentile	Median
Inpatient	0.667	0.723	0.912	0.952	0.971
Outpatient	0.608	0.670	0.702	0.791	0.897
Professional	0.407	0.923	0.936	0.952	0.965



Across our sample, we found strong positive correlations between the proportion of total service use accounted for by each service nationally and in each CBSAs. This indicates that within each service category, CBSAs tend to use each service in relatively similar proportions. In other words, within each service category CBSAs tend to use relatively similar mixes of services.

While a portion of the variation in our use index that we observe may be due to variation in the mix of service CBSAs used, we do not find that there is much of this variation in our sample. This finding provides evidence that within each service category variation in our use index is principally driven by variation in the volume of services performed within metro areas.

Within service categories, can changes in use levels reflect changes in which services metros use over time?

Technically yes, changes in use levels can result from changes in which services a metro uses at any given point in time. For example, let's say a CBSA used 100 of a particular service in 2012 that is weighted heavily when we compute our index. Let's also say that in 2016, this CBSA used none of that same service but a 100 more of a different service that is less heavily weighted when we compute our index. In this case, all else equal, the total number of services used would remain unchanged, but the overall use level would appear to be lower in 2016 than in 2012.

As with our above example, when we look at the data we find that within service categories the mix of services used both nationally and within each CBSA do not change meaningfully over time. In particular, we find that in general the proportion of services accounted for by each particular service remained fairly constant from 2012 to 2016. Below are the correlation coefficients between the percentage of total services accounted for by each sample service nationally in 2012 compared to 2016:

Table 2: Coefficients Correlation Between the Proportion of Total Services Accounted for by Each Sample Service Nationally in 2012 and 2016

Service Category	Correlation Coefficient
Inpatient	0.983
Outpatient	0.939
Professional	0.991



Additionally, we present the distribution of correlation coefficients for the percentages of total services accounted for by each sample service in each CBSA in 2016 and nationally in 2012 above in Table 1. In all cases we find very strong positive correlations. So, while changes in our service category use indices over time may partly reflect changes in which services are being used in a given metro, we do not find evidence that there were substantial changes in which services were used either at the national or the individual CBSA level. This suggests that changes in service category use levels over time primarily reflect changes in the volume of such services used by a particular CBSA.

How correlated were price and use levels?

Across service categories, we observed slight negative correlations between price and use index values. That is areas with higher price levels tended to have lower use levels more so than areas with lower price levels. There was some variation in the correlation between price and use index values across service categories, though, as seen below:

Table 3: Correlation Coefficients between CBSA Price, Use Index Values, 2016

Service Category	2016
Overall	-0.157
Inpatient	-0.130
Outpatient	-0.290
Professional	-0.066