



Nationwide® | Purdue
**Veterinary
Price Index**
February 2017 update



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The Nationwide® | Purdue Veterinary Price Index: Medical treatments continue to drive recovery

Analysis of more than 21 million medical and well-care veterinary treatments with a combined value of \$2.183 billion shows the national veterinary pricing recovery continued into mid-year 2016

Executive Summary

Veterinary pricing continues to recover from a multi-year decline, according to data analyzed for the February 2017 refresh of the **Nationwide® | Purdue Veterinary Price Index**. The Index analyzed more than 21 million pet health treatments from January of 2009 through June of 2016, representing 8.7 million pet health insurance claims with a total value of \$2.183 billion.

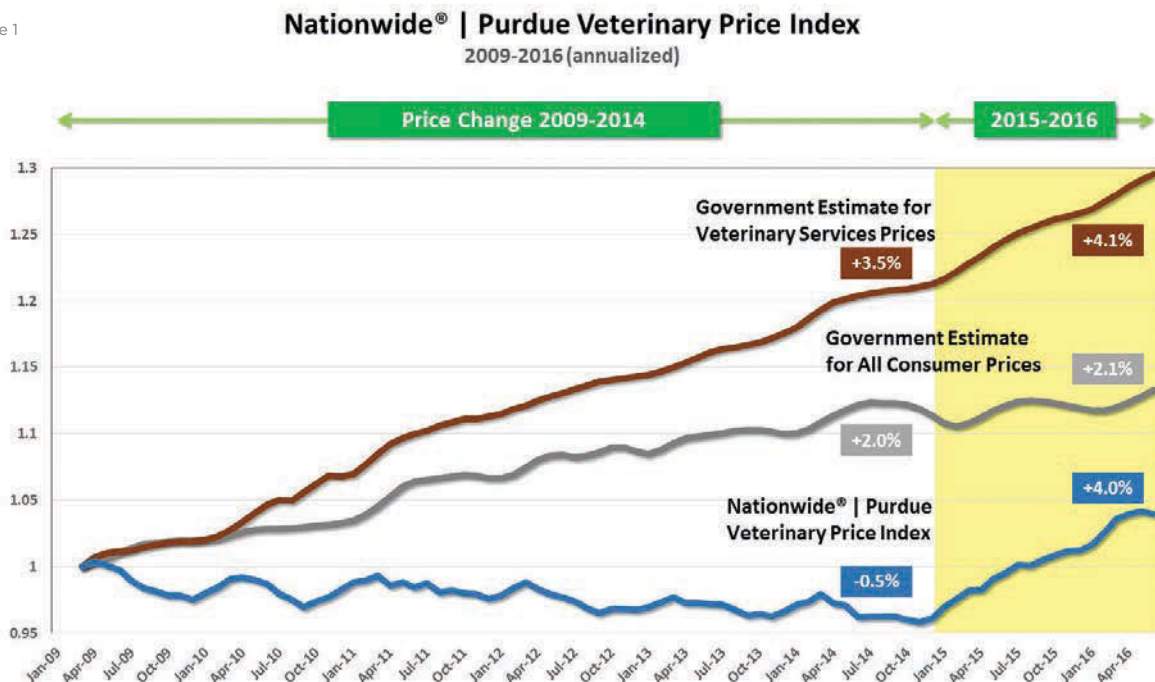
The benchmark analysis shows both medical and well-care pricing increasing from early 2015 through mid-year 2016 at a faster rate than the rise in the U.S. Consumer Price Index (CPI). The recovery continues to be strongest in geographic areas identified as urban or Midwest.

The Nationwide | Purdue study reveals a 4.0% increase in veterinary pricing during the period of January 2015 through June 2016. (See Figure 1) By comparison, the U.S. Consumer Price Index reports a 2.1% increase for all consumer spending on goods and services over the same period, and a 4.1% increase in pricing of veterinary services for the same time span. The continued increase

in the price index is being driven more by medical treatments than by well-care services.

Analysis of January 2015 through June 2016 claims by region and population density shows strong recovery in the Midwest and in urban areas. The Midwest posted a 6.1% increase in the 18-month period, with the data from the first six months of 2016 cooling the torrid pace of a 10.1% increase in 2015 as taken alone. Veterinary pricing in urban areas, already highest in the nation, rose 6.2% in the 18-month period. Pricing in the Midwest and South regions remains the lowest in the nation, as does pricing in rural areas.

Figure 1



The **Nationwide | Purdue Veterinary Price Index** is an ongoing collaboration between Nationwide and economists at the Krannert School of Management at Purdue University. Based on more than 21 million pet health insurance treatments filed with Nationwide (formerly Veterinary Pet Insurance® or VPI®) since 2009, the **Nationwide | Purdue Veterinary Price Index** reflects an accurate look at veterinary pricing by focusing on actual transactions.

With more than 585,000 insured pets, Nationwide is the first and largest pet health insurance provider in the United States. The **Nationwide | Purdue Veterinary Price Index** is refreshed and released twice a year.



Background

The pet-care industry has been recognized as a considerable force in the U.S. economy, estimated to be worth \$60.28 billion by the American Pet Products Association (APPA) in 2015, with a projected value of \$62.75 billion in 2016.¹ The APPA values the veterinary sector at \$15.42 billion (2015), behind spending on pet food, pet supplies and over-the-counter medications. As the popularity of companion animals and the amount spent on them continues to climb, both anecdotal reports from pet owners and statistical releases from the U.S. government has held that the cost of veterinary care is climbing faster than all consumer prices.

In late 2014, Nationwide began a collaboration with the Krannert School of Management at Purdue University to examine companion animal pricing data within the veterinary industry, based on actual claims data for medical and well-care treatments.

The relationship was developed to provide third-party access to data proprietary to Nationwide, under the business unit formerly known as Veterinary Pet Insurance (VPI). Nationwide has its own expert research team for both the financial and medical analysis of its peerless database of pet health insurance claims. However, the industry-academic collaboration was formed to provide a more independent analysis of veterinary pricing.

The inaugural **Nationwide | Purdue Veterinary Price Index** was presented at the North American Veterinary Community conference in January of 2015, with a refresh of the data and a subsequent analysis presented at the American

Veterinary Medical Association convention in July of the same year. This pattern of presentation continues, with semi-annual refreshes of the data and analysis planned for upcoming NAVC conferences and AVMA conventions. Concurrently, the reports are publicly released along with an overview of the original methodology on the website NationwideDVM.com. Further releases are provided on NationwideDVM social media platforms. Additionally, presentations have been and continue to be made to veterinary organizations. Panel discussions and presentations have also been provided at other major veterinary conferences, such as the Western Veterinary Conference and the CVCs.



Nationwide data shows continued veterinary pricing recovery

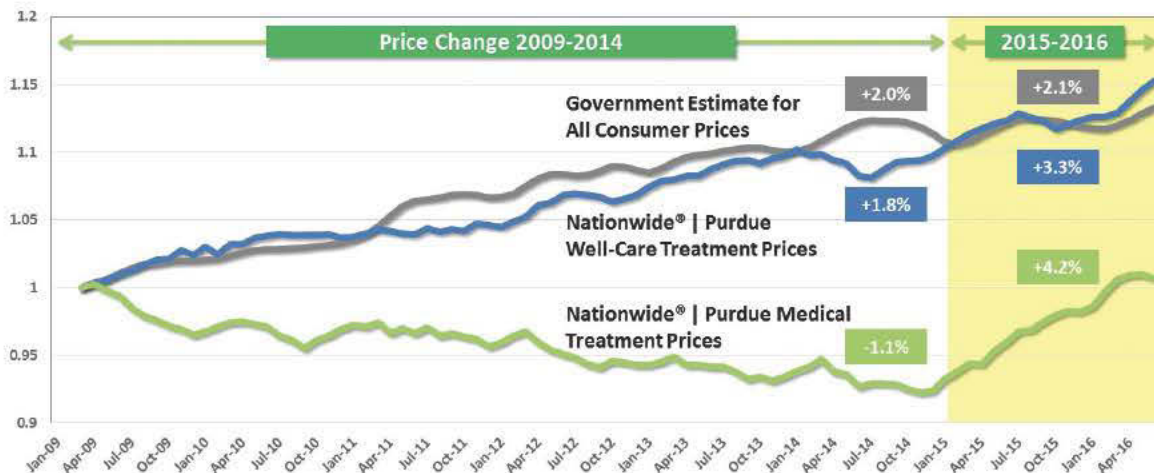
The **Nationwide | Purdue Veterinary Price Index** has made news since its inception. First, by countering the federal government's narrative on veterinary price increases, and then by tracking a trend shift reclaiming the pricing ground lost from 2009-2014. Articles covering the semi-annual reports have appeared in DVM360/Veterinary Economics, JAVMA news, and other prominent and well-respected industry journals, websites and publications. These reports helped establish the Nationwide | Purdue index as a key industry benchmark, and significant interest in its release developed quickly in the veterinary community. Discussions have continued with the AVMA's economics team to share raw data for further studies of benefit to the veterinary community, pet owners and the pets cared for by both.

The launch of the semi-annual **Nationwide | Purdue Veterinary Price Index** could not have been better timed. As the Nationwide | Purdue collaboration enters its third full year, it has captured the long-anticipated shift in veterinary pricing. After hitting bottom in December of 2014, veterinary pricing has seen steady increases ever since, based on the Nationwide | Purdue analysis. Strong increases in the overall index during the 18-month period beginning in January of 2015 (4.0%) were driven by the recovery of pricing for medical care (4.2%) more than by wellness care (3.3%). (See Figure 2)

Differences across regions and across areas of different population densities continue to reflect the pricing pressures in play. Both of the more modest regions for veterinary pricing – the

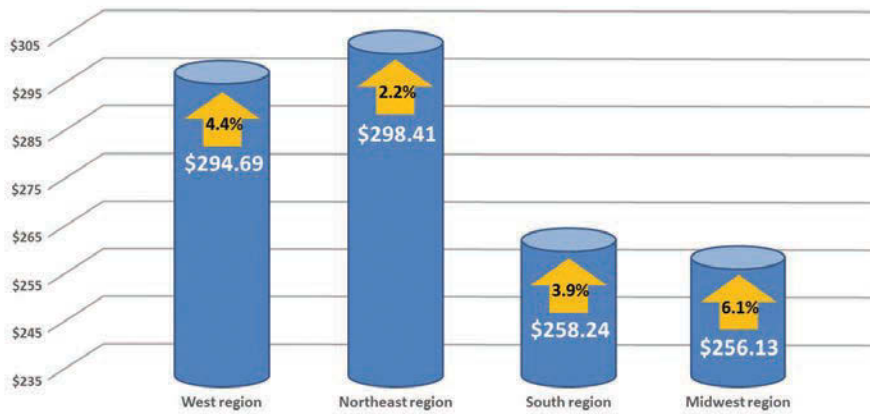
Figure 2

Nationwide® | Purdue Veterinary Price Index: Medical vs. Well-Care
2009-2016 (annualized)



Methodology

The Nationwide database breaks down claims filed by policyholders into specific treatments. The expense of each treatment is separately recorded in the claims database. The **Nationwide | Purdue Veterinary Price Index** analysis started with this claims database for services purchased by Nationwide (previously known as Veterinary Pet Insurance) members from 2009 to 2016. The bulk of the database is comprised of canine claims, so the focus of analysis is on veterinary services for



The four regions and their respective underlying divisions are defined as follows: The Northeast (New England and Mid-Atlantic states); the Midwest (East North Central and West North Central states); the South (South Atlantic, East South Central, and West South Central states); and the West (Mountain and Pacific states).

South and the Midwest – were first to show price increases in early 2015. Now all four regions show an increase in the 18-month period that began in January of 2015. Notably, the Midwest’s previous double-digit increase in 2015 has cooled to a 6.1% increase with the addition of data from the first six months of 2016.

dogs. Approximately 85% of insured pets across the pet health insurance industry are dogs.

The resulting dataset contains 1,329 distinct treatments for canines. The dataset classifies 1,202 of these treatments as “medical” treatments; the remaining 127 are classified as “well-care” treatments.

The Northeast continues to lead the nation in the pricing of veterinary care, with the Western region not far behind. The South and Midwest are likewise closely paired in pricing, at the other side of a pricing gap below the other two regions. Pricing in all four regions gained in the 18-month period that began in January of 2015.

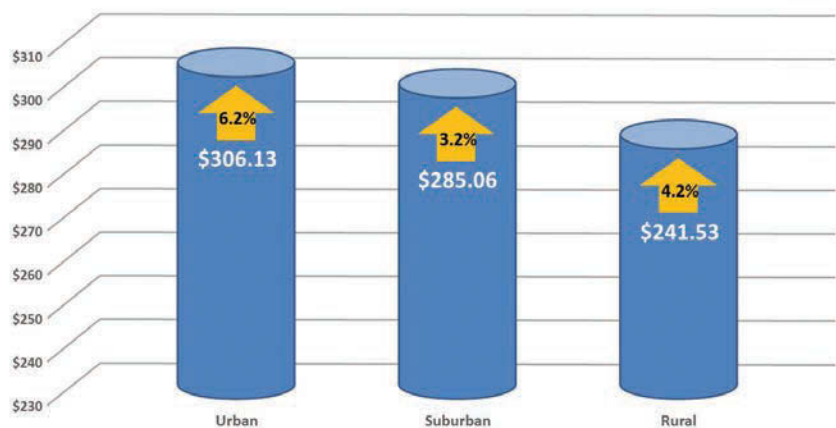
To construct a price index, it is important to have a large number of price observations of specific treatments spread over the entire time period being considered. The analysis was thus limited to canine treatments that are commonly observed

(See Figure 3) Overall gains for the 18-month study period remained constant from data reflecting 2015 pricing alone, with the exception of pricing in rural areas.

Urban, suburban and rural areas again all showed increases in pricing during the 18-month study period. Rural pricing showed a 3.4% increase when 2015 was considered alone, and a 4.2% increase when the first six months of 2016 were added. Urban and suburban price gains, 6.2% and 3.2% respectively, were little changed from 2015 with the addition of the 2016 data.

(See Figure 4)

January 2015 - June 2016 vs. January 2009 - December 2014 Figure 4



The three settings are based on the density of population (number of people square mile) for the ZIP code of the providers of the veterinarian services. Urban settings are ZIP code tabulation areas (ZCTA) with a population density equal to or above 5,000 people per square mile. Suburban settings are ZCTAs with a density between 1,000 and 5,000 people per square mile. Rural settings are ZCTAs with a population density less than or equal to 1,000 people per square mile.

in the claims data. In particular, only treatments that have at least 5,000 claims over the seven-year period from 2009 to 2016 and at least 500 claims each year during this period were considered. This reduces the number of canine medical treatments to 171, and reduces the number of well-care treatments to 42. The resulting dataset of “common” treatments for canines, however, still represents 84% of the total claim value recorded across all treatment codes. Figure 5 identifies some of the most common medical and well-care treatments.

Well-Care		Medical	
Vaccination Bordetella	952K	Otitis Externa	491K
Physical Exam	933K	Atopic or allergic dermatitis	479K
Heartworm test	906K	Pyoderma	344K
Fecal test	869K	Gastritis	247K
Vaccination DHL-P	835K	Osteoarthritis	230K
Vaccination Parvovirus	775K	Enteritis	224K
Vaccination Rabies	598K	Cystitis	193K
+35 other treatments		+164 other treatments	

The frequency of the treatment is based on claims data from Nationwide® for the period 2009-2016 (June)

Figure 5

To remain consistent on a year-over-year comparison basis, the 2013 base year for the basket of treatments used to calculate these indices was again used. Movement in the price indices reflect only price changes as the proportion of claims of each type are held constant at the level observed in 2013. In April 2014, VPI had a change in its claim process that impacted the way physical exam costs were represented in the dataset. In order to preserve consistency of the data before and after April 2014, the affected physical exams after April 2014 and those that would have been affected prior to April 2014 were excluded from the analysis. More than 80% of the physical exams were retained in the analysis.

The resulting **Nationwide | Purdue Veterinary Price Index** reflects important differences from the index of veterinary prices released by the U.S. government in critical ways. (See Figure 6)

The **Nationwide | Purdue Veterinary Price Index** is based on millions of transactions, building a true picture of veterinary services and pricing from a granular perspective. The U.S. government’s aggregated approach is based on hundreds of interviews, its final numbers a single brushstroke in the larger picture of consumer prices. By contrast, the **Nationwide | Purdue Veterinary Price Index** was solely intended to use the depth and breadth of the company’s historic database to develop a picture that accurately depicts veterinary service pricing. The index reflects not only transactions but also the larger trend toward preventive and well-care.

A more detailed accounting of the original methodology can be downloaded from the resources section of NationwideDVM.com.



Figure 6

Summation

This latest refresh of the **Nationwide | Purdue Veterinary Price Index** continues to show the pricing recovery reported in the previous semi-annual analyses. After years of falling veterinary prices reflected in pet health insurance claims, Nationwide’s data through mid-year 2016 confirms increases across all sorts of claims, all regions and all types of population densities. Over the 2009 to mid-year 2016 period covered by the Nationwide | Purdue analysis, however, veterinary pricing



still significantly lags pricing increases for other consumer goods and services. Despite the increase reflected in data from January 2015 through June 2016 (4.0%), the Nationwide | Purdue analysis of millions of actual claims shows veterinary pricing remains below U.S. Consumer Price Index estimates of the cost of veterinary services.

The next refresh of the **Nationwide | Purdue Veterinary Price Index** will be released in the summer of 2017 at the annual convention of the American Veterinary Medical Association. That study will reflect claims data from the entirety of 2016.

Nationwide considers such uses of its data to be of service not only to the small animal veterinary community but also to the broader community in the pet-care services industry, individual pet owners and Nationwide members. The ongoing commitment to the **Nationwide | Purdue Veterinary Price Index** represents a considerable investment in service to those overlapping communities.

In providing data to show trends in veterinary pricing, Nationwide continues to deliver on its promise to the veterinary community to provide information that will help pet owners and veterinarians work together as a team for the better health of companion animals that are so important to the continued well-being of people of all ages.

All releases of the **Nationwide | Purdue Veterinary Price Index** are available on Nationwide Chief Veterinary Medical Officer Dr. Carol McConnell's website for the veterinary community, NationwideDVM.com. Future releases will be posted there as soon as the information is made public.

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¹ "Pet Industry Spending Makes History: Surpasses \$60 Billion," American Pet Products Association (<http://media.americanpetproducts.org/press.php?include=146062>). Nationwide, the Nationwide N and Eagle, and Nationwide is on your side are service marks of Nationwide Mutual Insurance Company. ©2017 Nationwide. 17VET4471

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