2019

DRUG TREND REPORT

> A relentless pursuit to improve care and cost outcomes
For IngenioRx, 2019 was transformative, as we successfully migrated our clients and their millions of members to IngenioRx. The transformation demonstrated to clients and members the value unlocked through the creation of IngenioRx and, as our 2019 Drug Trend Report shows, how the power of our strategies continued to successfully manage trend.

As you will see in the pages that follow, our 2019 performance stemmed directly from our pharmacy management strategies, which entailed staying focused on several goals:

- Improving medication adherence rates
- Managing specialty drug trend
- Expanding cost-of-care programs
- Delivering an evidence-based, best-in-class formulary
- Partnering with providers

Unlike our competitors, our 3.1% trend reflects pharmacy costs across both medical and pharmacy benefits.

We managed overall utilization trend while improving adherence. Generic expansion had a positive impact on costs, and our specialty drug programs helped ensure members receive the treatments they need. Our partnerships, in turn, also helped ensure that providers prescribed the right medications to improve outcomes.

We help clients and members reclaim the power of pharmacy through a whole-health approach, demystifying pharmacy benefits, and emphasizing collaborative partnerships. We’re also committed to our mission to optimize health outcomes and improve members’ quality of life, while lowering the total cost of care.

As we look ahead, this report does not, of course, reflect the turbulent environment of 2020 due to the COVID-19 pandemic. Although we can’t predict the future or know how this global pandemic will end, we can remain steadfast in our commitment to our clients and members.

During the pandemic, IngenioRx has taken steps to help ensure members have access to medications. By waiving rules around how early a prescription may be refilled and adding more drugs to our 90-day prescription lists, we’re working to help ensure members receive the medications they need, when they need them.

The impact of COVID-19 aside, we know the challenges we face in health care will persist. Specialty drugs will continue to capture headlines with their sky-high launch prices; the drug pipeline will continue to expand with new and emerging drug classes; and macroeconomic pressures mean rethinking benefits and pharmacy management strategies.

But through it all, IngenioRx will maintain its focus on improving health and moving pharmacy forward.
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4   Making a difference through adherence
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10  Curbing specialty drug costs
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In 2019, we undertook the unprecedented work of accelerating the transition of our clients — and their millions of members — to IngenioRx.

The decision to accelerate the transition highlights our belief in the value IngenioRx creates for clients and members. The success of the transition demonstrates our organizational expertise and ability to deliver high-quality service along with cost savings and improved health.

The launch of IngenioRx gave us full control of the pharmacy benefit services we deliver. The transition allowed us to truly leverage our unique approach to managing pharmacy benefits: a holistic view of spending, focusing on the quality of care.

Unlike others, we measure drug trend for all medications, whether covered by a pharmacy or medical benefit.

Our commitment to operational excellence and the highest quality of care resulted in a 3.1% total drug trend for our commercial business that included treatments covered under pharmacy and medical benefits.

Our approach lowers cost while helping to ensure members receive the treatments they need. For instance, IngenioRx’s Right Drug Right Channel program directs self-administered drugs to the pharmacy benefit and clinician-administered drugs to the medical benefit, while our Site of Care program guides members to clinically appropriate, cost-effective sites of care.
Our Specialty Condition Management program is designed to deliver integrated, specialized support to help members manage their health care needs holistically.

Our focus on monitoring new drugs — identifying high-profile therapies early in development — helped keep unit cost trend low. We examine efficacy, forecast the cost impact, and have clinical criteria in place before a drug launches to help ensure clinically appropriate use while reducing waste.

What’s more, our program to block drugs that lack U.S. Food and Drug Administration (FDA) approval increases safety by preventing unregulated drugs from reaching members. We review newly released medications weekly to ensure we understand clinical evidence the FDA has reviewed for approval.

The block program has saved about $500 million over the past six years.1 Adding more than 100 drugs to the block program in 2019 generated savings of 25 to 30 cents per member per month (PMPM).

IngenioRx kept overall trend at 3.1% and utilization trend2 at just 1.5%. Unit cost trend3 was 1.6%. Beneath the surface, however, lies a more complex story: Through the increased use of generics and network performance, we mitigated unit cost trend 7.1%.

Specifically, we achieved:

- 4% decrease in unit cost trend through network management, pointing to IngenioRx’s ability to manage its network.
- 3.1% decrease in unit cost trend through generics expansion, as the percentage of generic prescriptions went from 85.8% in 2018 to 86.4% in 2019.

2019 unit cost trend

8.7 → 1.6%

7.1% reduction in unit cost trend
t through the increased use of generics and network performance
Medication nonadherence costs as much as $300 billion in lost productivity and unnecessary health care spending annually, accounting for 10% of hospital admissions and as many as half of medication treatment failures.\(^4\) Worst of all, nonadherence results in 125,000 preventable deaths each year.\(^5\)

Adherence has a direct impact on the quality of members’ lives, not to mention the total cost of care. Our pharmacy programs increased adherence in 2019, improving health outcomes for our members while minimizing expenses in several treatment areas.

Our efforts to improve adherence led to significant lifestyle changes for members living with chronic conditions. In fact, more than 6 in 10 members with chronic conditions who were nonadherent in 2018 achieved full adherence in 2019 by participating in our programs.\(^6\)

For example, members living with diabetes, high blood pressure, and high cholesterol increased their adherence on average 13% for each disease state.

Among nonadherent members in 2018, more than 60% became fully adherent in 2019.

This attention to adherence produced tangible results. Our analysis found that members who became adherent in 2019 had lower total costs on a PMPM basis relative to members who remained nonadherent.
For example, IngenioRx’s clinical gaps-in-care programs improved adherence for oral anticoagulants, helping to minimize serious bleeding events and recurrence of blood clots and strokes. Nonadherent members who became adherent in 2019 had an inpatient admission rate roughly 32% lower than members who remained nonadherent year over year.

But just how do we improve adherence?

**Moving members to lower-cost generic alternatives from branded medications when possible.** Thirty percent of Americans are not adherent due to medication costs — helping members switch from branded to generic drugs when appropriate improves adherence.

**Increasing the percentage of members receiving 90-day supplies of drugs.** Our efforts resulted in 18.6% of members with 90-day prescriptions in 2019, up from 14.4% in 2018.

The percentage of members with 90-day supplies of medication for high blood pressure and high cholesterol rose from 27.6% in 2018 to 38.1% in 2019 and 32.5% in 2018 to 44.6% in 2019, respectively. For those members taking diabetes medications, 29.5% received a 90-day supply in 2019 versus 22.7% in 2018.
Engaging members in our specialty adherence programs. In part, IngenioRx improves medication adherence through programs that help members take their specialty medications as prescribed, as with automated, interactive voice response calls to members starting a hepatitis C treatment regimen or who are late refilling prescriptions.

We also have refill reminder outreach, email, and text messaging to all members receiving medications through our specialty pharmacy. In 2019, we implemented programs supporting the adherence of hepatitis C, cystic fibrosis, multiple sclerosis, transplant, and HIV medications.

### Year-over-year change in adherence among nonadherent members

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>Percentage of adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular medications</td>
<td>68%</td>
<td>75%</td>
<td></td>
</tr>
<tr>
<td>Oral anticoagulants</td>
<td>63%</td>
<td>73%</td>
<td></td>
</tr>
<tr>
<td>Oral breast cancer medications</td>
<td>59%</td>
<td>66%</td>
<td></td>
</tr>
</tbody>
</table>

### Adherence savings

<table>
<thead>
<tr>
<th></th>
<th>Total PMPM net change</th>
<th>Inpatient PMPM net change</th>
<th>Change in inpatient utilization rate per 1,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular medications</td>
<td>-$771</td>
<td>-$716</td>
<td>-4%</td>
</tr>
<tr>
<td>Oral anticoagulants</td>
<td>-$26</td>
<td>-$222</td>
<td>-32%</td>
</tr>
<tr>
<td>Oral breast cancer medications</td>
<td>-$607</td>
<td>-$76</td>
<td>-49%</td>
</tr>
</tbody>
</table>

* The table reflects the lower costs and utilization rate for members who became adherent in 2019 versus members who did not.*
IngenioRx takes a comprehensive approach to reducing costs.

Interventions like step therapy and prior authorization help ensure clinically appropriate use, eliminate waste, and lower health care costs. We create clinical policy based on high-quality evidence of each drug to help ensure that members who can benefit from a drug actually receive the drug. That includes drugs covered through the pharmacy or medical benefit.

For instance, take the example of a new drug that treats adults with a hereditary protein condition — and can cost more than $450,000 per year. Through our Pharmacy and Therapeutics (P&T) Committee, we reviewed the treatment to ensure proper management of the drug, and that only members who will benefit from the treatment receive it. It’s an example of how we review drugs to ensure prior authorization criteria are aligned and consistent.

When it came to another drug with several FDA-approved indications, clinical evidence did not support that the $60,000-per-prescription treatment is clinically superior to a $50 steroid injection. We made sure our authorization criteria reflected appropriate use.

Or consider how we manage a certain statin that costs more than $400 per prescription. We’ve put in a step-therapy policy that requires using lower-cost generics first. In doing so, we identify members who take certain drugs with alternatives and then suggest that option through member and provider outreach.

In terms of total cost of care, our generics programs saved nearly $3 PMPM in 2019.
Savings for a 30-day supply of generic drugs versus brand-name equivalent

<table>
<thead>
<tr>
<th>Drug</th>
<th>Condition</th>
<th>Cost difference for generic</th>
<th>Member out-of-pocket cost for generic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic pregabalin</td>
<td>Inflammation/pain</td>
<td>🔻 89%</td>
<td>🔻 88%</td>
</tr>
<tr>
<td>Generic tadalafil</td>
<td>Erectile dysfunction</td>
<td>🔻 54%</td>
<td>🔻 70%</td>
</tr>
<tr>
<td>Generic fluticasone-salmeterol</td>
<td>Asthma</td>
<td>🔻 52%</td>
<td>🔻 62%</td>
</tr>
<tr>
<td>Generic testosterone</td>
<td>Hormone supplementation</td>
<td>🔻 43%</td>
<td>🔻 55%</td>
</tr>
<tr>
<td>Generic albuterol sulfate HFA</td>
<td>Asthma</td>
<td>🔻 39%</td>
<td>🔻 41%</td>
</tr>
</tbody>
</table>
Specialty medications treat only a small percentage of people, but account for nearly 45% of all drug spending, a figure expected to rise to 52% by 2024. In part, the increased use of such drugs resulted in a specialty drug trend of 11.4% in 2019.

We took significant steps to curtail specialty trend, such as expanding programs to improve drug-use efficiency that reduced the overall cost of care.

In 2019, we leveraged several of our specialty pharmacy programs to help meet this objective:

**RIGHT DRUG**

**RIGHT CHANNEL**

This program covers treatments under the most clinically appropriate benefit — medical or pharmacy — to help our members achieve optimal health outcomes at the lowest possible cost. Right Drug Right Channel is a vital tool to help improve members’ health and avoid unnecessary administration costs, which can come when a treatment is billed under the wrong benefit.

**SITE OF CARE**

Site of Care helps determine whether treatment is occurring in the most cost-effective setting (moving from an outpatient hospital to the home, for example) based on a patient’s clinical needs. The Site of Care program resulted in a savings of $35.7 million in 2019 for specialty drug spend.

**SPECIALTY CONDITION MANAGEMENT**

We offer extra support managing overall health for members with chronic diseases. Nurses and pharmacists take a holistic approach in working with members through managing drug therapy and disease education.

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**The Specialty Condition Management program saves an estimated $303 per engaged member per month in cost of care.**
Specialty drug spend

Although they only treat a small percentage of people, specialty medications account for close to 45% of all drug spending — a figure that’s expected to rise to 52% by 2024.

Top drug classes in drug spend, 2019

<table>
<thead>
<tr>
<th>Rank</th>
<th>Drug class</th>
<th>PMPM</th>
<th>Rx/1,000 members</th>
<th>Specialty drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Anti-TNF-alpha — monoclonal antibodies</td>
<td>$8.67</td>
<td>17.32</td>
<td>✓</td>
</tr>
<tr>
<td>2</td>
<td>Antiretrovirals</td>
<td>$6.75</td>
<td>30.47</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Insulin</td>
<td>$5.94</td>
<td>97.89</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Antipsoratics</td>
<td>$5.69</td>
<td>9.74</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>Antineoplastic enzyme inhibitors</td>
<td>$5.62</td>
<td>5.68</td>
<td>✓</td>
</tr>
</tbody>
</table>
CASE STUDY

Building relationships with providers is critically important to how we manage drug trend.

Take the case of one such partnership between IngenioRx and a large, Indiana-based provider group.

This provider group worked with a dedicated IngenioRx pharmacist, facilitating the exchange of pharmacy best practices, improving the quality of care, and leading to an overall reduction in the cost of care. Specifically, the partnership was focused on opportunities to lower the cost of care for asthma, chronic obstructive pulmonary disease (COPD), and diabetes.

Over the course of 2019, the results of this partnership were striking:

- **$230,000+ cost savings** through helping clinicians switch to prescribing a lower-cost drug to treat patients with asthma, COPD, and diabetes
- **31.9% reduction** in utilization of branded asthma medications
- **84% reduction** in the number of prescriptions for unusually high-cost metformin products used to treat diabetes

The outcomes were directly related to how we help provider partners:

- Identification of high-cost medications that have equally effective, lower-cost alternatives and help guiding clinicians to prescribe them
- Use of tools that enable providers to recognize lower cost-of-care opportunities, such as switching from a high-cost treatment setting like a hospital to self-administering drugs at home
- Improving medication adherence through programs such as extending supplies of drugs from 30 to 90 days
IngenioRx is partnering with providers beyond individual, one-on-one contact. We leverage pharmacist outreach and online portals that provide member-specific and population health information, and through electronic medical records connectivity, we offer providers member-specific, real-time pharmacy benefit checks, secure direct messaging, and gaps-in-care information.
Like you, we’ve been thinking hard about pharmacy issues beyond trend. Of course, much of our attention has been keeping members healthy during the COVID-19 pandemic and how that may affect the future of health care. But even with the pandemic, there are other issues to consider.

Here are our views on five issues you’ve been asking us about — and how COVID-19 might affect some of them:

1/ THE COST OF SPECIALTY DRUGS

It’s no wonder plan sponsors, members, and payers are worried about the cost of specialty drugs. Although comprising only 2.2% of prescription volume, specialty drugs accounted for nearly $220 billion, or 45%, of all drug spending in 2018. By the end of this year, specialty drugs are expected to account for half of all drug spending.

While only a small portion of the population needs specialty drugs, they can cost thousands of dollars per month due to the drugs’ complexity and need to administer them at a high-cost site, such as a hospital clinic or infusion center. What’s more, many specialty drugs are large-molecule biologics without a lower-cost biosimilar. Due to a host of factors, biosimilar uptake in the United States has been slow.

In the first week of 2020, drug manufacturers announced price hikes on nearly 450 medications, including many specialty drugs to treat rheumatoid arthritis, cancer, multiple sclerosis, and other conditions for which demand is insensitive to price hikes.

The premiums specialty drugs command and their profitability are likely to command drug manufacturers’ attention and resources for the foreseeable future. It’s unlikely that we will see specialty drug prices falling in the near term.
Despite the challenges, there are ways to keep the cost of specialty drugs in check, as we demonstrated in 2019. Integrated pharmacy and medical benefits provide deep insight into overall health.

We also vet specialty medications to determine whether new treatments outperform lower-cost alternatives, and we monitor adherence.

**Specialty drugs: a tale of opposites**

<table>
<thead>
<tr>
<th></th>
<th>Specialty drugs</th>
<th>Nonspecialty drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRESCRIPTION VOLUME</td>
<td>2.2%</td>
<td>97.8%</td>
</tr>
<tr>
<td>TOTAL SPEND</td>
<td>Specialty drugs</td>
<td>45% = $220 billion</td>
</tr>
<tr>
<td></td>
<td>Nonspecialty drugs</td>
<td>55%</td>
</tr>
</tbody>
</table>

Spend on specialty drugs has been creeping upward for years. By the end of 2020, it’s expected to account for half of total drug spend, while the specialty drug class continues to only be used by a small percentage of the population.
The emergence of COVID-19 as a public health threat in 2020 has the potential to alter the drug pipeline, though it’s unclear how. As of late April 2020, more than 200 drugs were in development as treatment for the novel coronavirus in the United States and 242 worldwide, as well as nearly 50 vaccines.16

The pandemic comes against a background of a burgeoning drug pipeline that already has pushed drug trend upward.

In addition, the FDA approved a drug in early 2020 treating gastrointestinal stromal tumors (GIST)19 that costs close to $400,000 a year;20 and another for thyroid eye disease, with a cost of more than $350,000 per treatment course.21

These new drugs will undoubtedly put pressure on trend. Through our P&T committee, we forecast, track, and monitor the pipeline — far ahead of a drug’s launch — to evaluate the cost versus the benefit of every drug going to market.

In addition, the same drugs that pressure trend can also help reduce costs for overall health when these new drugs result in better outcomes. Because we apply a strict criteria in evaluating new drugs, the large number of expensive new drugs doesn’t necessarily always push overall costs in the wrong direction.

And given what’s transpired the first few months of this year, we do not expect 2020 to be any different. A sampling: A new class of cholesterol treatments approved in February lists for $3,500 a year, and in January, the FDA approved a peanut-allergy treatment for children and adolescents that costs approximately $11,000 annually.18
During the first half of 2019, drug companies raised prices on more than 3,400 drugs, 17% more than in the same period from a year earlier. The average price increase was 10.5%, or five times the rate of inflation.\(^2\) And as mentioned earlier, drugmakers rose prices on nearly 450 treatments at the start of 2020.\(^15\)

Price increases on branded and generic drugs have caused public and political turmoil, as have the sky-high prices of some specialty drugs.

However, observers think that it’s unlikely any movement on drug legislation will occur before the November election.\(^24\) The initial $2 trillion relief package passed in March contains provisions to extend certain Medicare programs that were set to expire in May through November.\(^25\) And initial legislation efforts have been exclusively focused on government payers.

Given the changes in the world, it is almost impossible to tell how the issue of drug affordability will play out in 2020. The immense strain on the American economy, including massive unemployment and scores of businesses forced to shutter, also throws uncertainty into how a wide swath of Americans will afford medications.

What we can predict with certainty is that IngenioRx is committed to keeping drugs affordable and available during the pandemic, with steps that include relaxing early prescription refill limits for most maintenance medications.

The change has been strongly felt in Congress. Before the coronavirus pandemic hit the United States full force, there had been a strong push to regulate drug prices, including legislation that could lower the price of prescription drugs in Medicare, saving approximately $95 billion over 10 years.\(^23\)
4/ THE EMERGENCE OF PHARMACOGENOMICS

Pharmacogenomics, the practice of using an individual’s genetic makeup to determine drug response, has the potential to touch every aspect of the health care continuum.

Pharmacogenomics aims to eliminate medical trial and error, increase medication adherence, reduce drug waste, and minimize costly side effects. The main emphasis is to help ensure patients receive the optimal therapy, given their genetic makeup.

Pharmacogenomics has been discussed as an emerging trend for the better part of a decade and has been the subject of study for at least as long. However, the technology has improved during the same time, and if pilot programs like the one described here prove fruitful in improving health and lowering costs, expect pharmacogenomics to become a powerful tool in managing pharmacy benefits.

5/ EXPLORING ARTIFICIAL INTELLIGENCE’S VAST POTENTIAL

Artificial intelligence (AI) now occupies the industry’s full attention: In one survey, fully 75% of health care executives said artificial intelligence will be pervasive within the industry by 2025.

AI allows health care professionals to act faster on insights derived from data. The potential for AI in pharmacy is exciting: It can forecast which patients within a treatment pool are at high risk for complications and help doctors with diagnoses. It also holds promise in developing medications and new applications for existing drugs.

Today, IngenioRx uses AI to help identify members at the largest risk for medication nonadherence, which allows for targeted outreach to those members.

IngenioRx’s Adverse Drug Event Predictive Modeling helps predict which of our members are at risk for a negative reaction to a medication — and helps reduce hospitalizations and emergency room visits that can result from adverse drug events, like acute kidney injury, hyperglycemia, and bleeds. For the future, we are exploring the ability to use AI to best predict treatment regimens for specific diseases based on members with similar characteristics.

Predictive models showing a member’s risk for cardiovascular disease, for instance, can help direct members toward preventive or early detection options, which may help them avoid a diagnosis or disease complication later that could cost hundreds of thousands of dollars. Cost-saving opportunities also exist in AI through streamlining financial data, and in using telehealth or other application-based provider interactions.

Research has found that in some cases, pharmacogenomics testing saved more than $1,000 in annual medication costs compared to patients who didn’t receive testing (not taking into account the cost of the test).

An example of one pilot: IngenioRx’s program to see if members have the enzyme to convert the blood-thinner medication clopidogrel into its active form. If members don’t possess the enzyme, we can provide alternative therapies to prevent secondary major adverse cardiovascular events immediately after a heart attack or stroke.
Pharmacy and medical de-identified drug utilization data was analyzed for the Commercial group population, representing approximately 6 million members with both pharmacy and medical coverage carved in. Pharmacy-dispensed specialty drugs, pharmacy-dispensed nonspecialty drugs, medically covered specialty drugs, and medically covered nonspecialty drugs administered under the medical benefit (excluding inpatient site of service) were included. Any clients contractually prohibited from inclusion were excluded, as well as Commercial outlier groups. Integrated trend statistics assessed the change in gross spend (net of rebates), which included drug ingredient costs (under medical and pharmacy), as well as pharmacy-specific taxes and dispensing fees. Medical administration costs were not included.

Total trend comprises utilization trend and unit cost trend. Utilization trend is defined as the rate of change in total days’ supply per member per month. Unit cost trend is defined as the rate of change in treatment costs due to inflation; prescribing practices; and IngenioRx trend-management strategies driving decreases in the unit cost of drugs, thus decreasing drug trends.

There is no universally accepted definition of a specialty drug, and there are differences in payer specialty drug lists, client spend, and trends. Some of the attributes that IngenioRx uses to drive this definition include drugs that:

- Are used to treat complicated disease states that are chronic and low incidence. Typically, 2% to 4% of a group’s population will utilize specialty drugs, with spend being reimbursed under both pharmacy and medical benefits.
- Are usually biologic in origin and derived from a cell culture versus being chemically manufactured. This increases their cost and can cause immunogenicity issues for members. It also limits the number of manufacturers, leading to less competition and fewer choices for treatment.
- Are usually injected or infused and may require administration by a clinician. Some may be orally administered or inhaled.
- Require frequent dosing adjustments and clinical monitoring, which is why they are typically dispensed through specialty pharmacies. Dosage adjustments also present challenges with delivery needs and possible treatment disruptions if the drug is not readily available.
- Are typically high in cost.
5 MARKET ISSUES WE'RE WATCHING

1 IngenioRx 2018 Drug Trend Report.

2 Utilization trend is the rate of change in total day’s supply per member per month.

3 Unit cost trend is the rate of change in treatment costs due to average wholesale price (AWP) inflation, shifts to different drug options, and discount off AWP.


6 Full adherence requires proportion of days covered (PDC) of 80% or more for most conditions. A handful of conditions require 90% PDC to be deemed adherent.


10 IQVIA: Global medicine spending and usage trends: outlook to 2024 (March 5, 2020): iqvia.com.


15 Advisory Board: One week into 2020, drugmakers have announced nearly 450 price hikes (January 6, 2020): advisory.com.

16 Various sources, including the FDA, company statements, and news reports.


20 Based on wholesale acquisition cost and FDA-approved dosing for an adult patient. IngenioRx internal data, January 2020.

21 Based on wholesale acquisition cost and FDA-approved dosing for a 70kg patient. IngenioRx internal data, January 2020.

22 CBS News: Drug prices in 2019 are surging, with hikes at 5 times inflation (July 1, 2019): cbsnews.com.


