

Drug Price Forecast Highlights

July-August 2018



Executive summary

The Drug Price Forecast is our best estimate of the change in the cost of pharmaceuticals that participants in the Vizient Pharmacy Program will be purchasing from Jan. 1–Dec. 31, 2019. The forecast focuses on pharmaceutical products used across multiple health-system settings, including inpatient and non-acute environments, and provides a year-over-year estimate of the expected price change.

Projected inflation rate

4.92%

Weighted by Vizient member purchases.
All classes of trade; excludes 340B purchases.

Highest-spend therapeutic classes for Vizient members

Therapeutic category	Key products in class
Disease-modifying antirheumatic agents	Remicade, Humira, Enbrel
Antineoplastic agents	Rituxan, Keytruda, Avastin
Immunomodulatory agents	Tysabri, Copaxone, Ocrevus
Anti-infectives	Harvoni, Epclusa, Zepatier, Cubicin, Invanz, Noxafil
Plasma critical care	Gamunex, Privigen, Gammaguard, Alburx, Albutein, Flexbumin
Hematopoietic agents	Neulasta, Aranesp, Procrit
Vaccines	Pevnar, Gardasil, Pneumovax
Diabetes agents	Lantus, Humalog, Novolog

Positive developments

- Increasing competition in the generic and biosimilar markets
- Improvements in specialty pharmacy management
- Government attention to cost issues

Ongoing challenges

- Supply chain interruptions, exacerbated by regulations and natural disasters
- Opioid addiction crisis
- Unsustainable introductory costs for new drugs
- Reimbursement issues

Our advice

Maintain focus on:

- Strategic role for pharmacy
- Specialty pharmacy
- Biosimilars
- Advocacy



Timelines and approvals

2018–2019

New drug approvals

Regulatory events

Generic/biosimilar availability

Ivosidenib
AML
Aug 21, 2018

Eravacycline
MDR bacterial infections
Aug 28, 2018

Comprehensive Addiction and Recovery Act of 2015
Pain Management Interagency Task Force
Jul 22, 2018

Amikacin liposome inhalation suspension
Nontuberculosis mycobacterial lung disease
Sep 28, 2018

FY 2019 CMS IPPS rule finalized
Aug 1, 2018

Doravirine
HIV
Q4 2018

Omadacycline
MDR bacterial infections
Q4 2018

Cemiplimab
Metastatic CSCC
Oct 26, 2018

EPA Management Standards for Hazardous Waste Pharmaceuticals
Final rule in 2018
Q4 2018

Moxetumomab pasudotox
Hairy cell leukemia
Oct 31, 2018

Larotrectinib
Solid tumors
Nov 26, 2018

Baloxavir marboxil
Influenza
Dec 24, 2018

DQSA Title 2: DSCSA (“track and trace”)
Drug package serialization and T3 information electronically
Nov 27, 2017 (enforcement delayed until Nov 26, 2018)

Lisocabtagene maraleucel
ALL
Dec. 31, 2018

Siponimod
MS
Dec 31, 2018

Upadacitinib
RA
Dec 31, 2018

2018 Q3

Vardenafil
Levitra (2.5, 5, 10, 20 mg)
Q3 2018

Dalfampridine
Ampyra
Jul 2018

Rituxumab
Rituxan
Jul 2018

Cinacalcet HCl
Sensipar
Sep 8, 2018

Mometasone furoate
Asmanex Twisthaler
Sep 17, 2018

Q4

Arsenic trioxide
Trisenox
Nov 30, 2018

Silodosin
Rapaflo
Dec 2018

Mesalamine
Canasa
Dec 2018

Pimecrolimus
Elidel
Dec 26, 2018

Abbreviations: ALL = acute lymphoblastic leukemia; AML= acute myeloid leukemia; CMS = Centers for Medicare & Medicaid Services; CSCC = cutaneous squamous cell carcinoma; DSCSA = Drug Supply Chain Security Act; DQSA = Drug Quality and Security Act; EPA = Environmental Protection Agency; FY = fiscal year; IPPS = Inpatient Prospective Payment System; MACRA = Medicare Access and CHIP Reauthorization Act; MDR = multi-drug resistant; MIPS = Merit-based Incentive Payments System; MRSA = methicillin-resistant *Staphylococcus aureus*; MS = multiple sclerosis; PDUFA = Prescription Drug User Fee Act; RA = rheumatoid arthritis.

Timelines and approvals

2018–2019

New drug approvals

Regulatory events

Generic/biosimilar availability

Iclaprim

MRSA
Feb 14, 2019

Ozanimod

MS
Mar 31, 2019

CMS MACRA

Performance measures (MIPS) enforced Jan 1, 2017
Jan 2019

Risankizumab

Psoriasis
April 2019

Sacituzumab govitecan

Metastatic breast cancer
May 21, 2019

USP chapter <800>

Delayed enforcement date: Jul 1, 2018
Intended official date Dec 1, 2019

USP chapter <797>

Revised Jul 27, 2018
Final Jun 1, 2019
Intended official date Dec 1, 2019

USP chapter <795>

Revised Mar 30, 2018
Final Jun 1, 2019
Intended official date Dec 1, 2019

2019 Q1

Q2

Q3

Q4

Trastuzumab

Herceptin
Q1 2019

Ranolazine

Ranexa
Feb 27, 2019

Lurasidone HCl

Latuda
Jan 2, 2019

Fosaprepitant dimeglumine

Emend (injection)
Mar 4, 2019

Minocycline HCl

Solodyn (80 mg)
Feb 2019

Fulvestrant

Faslodex
Mar 25, 2019

Fingolimod

Gilenya
Feb 18, 2019

Solifenacin succinate

Vesicare
Apr 2019

Itraconazole solution

Sporanox
Jun 30, 2019

Deferasirox tablets

for oral suspension
Exjade
Apr 30, 2019

Pregabalin

Lyrica (capsule)
Jun 30, 2019

Febuxostat

Uloric
Jun 30, 2019

Bevacizumab

Avastin
Jul 2019

Bendamustine

Treanda
Nov 30, 2019

Erlotinib

Tarceva
2019

Cyclosporine ophthalmic emulsion

Restasis
2019

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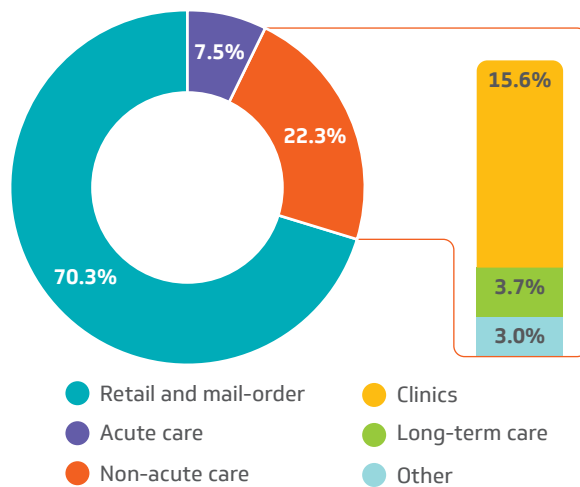
A closer look by segment

Total U.S. drug spend, CY 2017:

\$456B

Acute and non-acute care

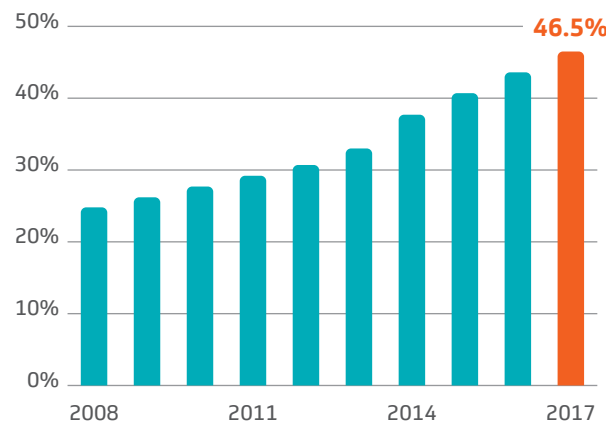
Distribution of U.S. drug spend across all areas of care, CY 2017



Schumock GT, Stubbings J, Wiest MD, et al. National trends in prescription drug expenditures and projections for 2018 [published online ahead of print May 10, 2018]. *Am J Health Syst Pharm.* 2018;75(11):e353-373.

Specialty pharmaceuticals

Specialty pharmacy spend as a percentage of U.S. net per capita spend



IQVIA Institute for Human Data Science. *Medicine Use and Spending in the U.S. A Review of 2017 and Outlook to 2022.* <https://www.iqvia.com/institute/reports/medicine-use-and-spending-in-the-us-review-of-2017-outlook-to-2022>. Published April 19, 2018. Accessed June 3, 2018.

Pediatric

Top drug spend among children's hospitals

Rank	Drug (brand name; manufacturer)
1	Dinutuximab (Unituxin; United Therapeutics)
2	Pegaspargase (Oncaspar; Shire)
3	Infliximab (Remicade; Janssen Pharmaceuticals)
4	Recombinant human coagulation factor VIIa (rFVIIa) (Novoseven RT; Novo Nordisk)
5	Palivizumab (Synagis; Astra Zeneca)
6	Sildenafil (Revatio; Pfizer)
7	Asparaginase (Erwinaze; Jazz Pharmaceuticals)
8	Somatropin (Genotropin, Humatrope, Norditropin FlexPro, Nutropin AQ, NuSpin, Omnitrope)
9	Eculizumab (Solaris; Alexion)
10	Immune globulin, gamma (IgG)/glycine/IgA (Gamunex-C; Genentech)

Overall drug spend increased by 58% from 2012–2017, even though the number of prescriptions dispensed decreased, indicating that increases in spend are due to higher drug prices, not higher utilization.

Pharmaceutical spending growth will continue to rise as a result of new approvals of specialty and orphan drugs as well as biotherapeutics.

Key therapeutic class summaries

Immunomodulators, oncology drugs, and plasma products

Multiple sclerosis

7.33%

Period projected inflation rate

Generic competition for top-selling disease-modifying therapies is increasing; adoption of the generic alternatives is slower, but their market share is beginning to grow.

Top 5 MS drugs

Drug (brand name)

Ocrelizumab (Ocrevus)

Natalizumab (Tysabri)

Glatiramer (Copaxone)

Fingolimod (Gilenya)

Dimethyl fumarate (Tecfidera)

Rheumatoid arthritis

8.57%

Period projected inflation rate

Biosimilars of infliximab have had a slower volume penetration than anticipated due to reimbursement issues and competitive contracting.

Top 5 RA drugs

Drug (brand name)

Infliximab (Remicade)

Adalimumab (Humira)

Etanercept (Enbrel)

Abatacept (Orencia)

Certolizumab (Cimzia)

Plasma (IgIV, albumin)

3.10%

Period projected inflation rate

Plasma-derived product utilization continues to grow in both the U.S. and emerging markets as a result of new indications and improved patient access. Manufacturers are increasing production to meet higher-than-expected demand.

Oncology

4.32%

Period projected inflation rate

PD-1 and PD-L1 inhibitors continued to make headlines with the approval of new indications and increased utilization. These costly medications account for a high percentage of oncology pharmacy spend.

Key therapeutic class summaries

Infectious disease agents

Antibacterials/antifungals

1.45%

Period projected inflation rate

Cost drivers among antibacterials include antibiotics for drug-resistant and gram-negative organisms, and increasing prices for older generics. Trends in antifungal spend have not changed substantially

Top five antifungals

1	Azoles
2	Echinocandins
3	Flucytosine
4	Amphotericin
5	Nystatin

Hepatitis C medications

0.00%

Period projected inflation rate

Overall annual spend on direct-acting antivirals has increased by 12,600% since the launch of the first product in 2013, but the market for these drugs has peaked.

Top seven hepatitis C medications

1	Harvoni	6	Viekira
2	Epclusa	7	Vosevi
3	Sovaldi		
4	Zepatier		
5	Mavyret		

Vaccines

5.76%

Period projected inflation rate

Pneumococcal vaccines continue to dominate spend in the vaccine category, but there is a robust pipeline of investigational vaccines, including both new products and competitors for existing ones.

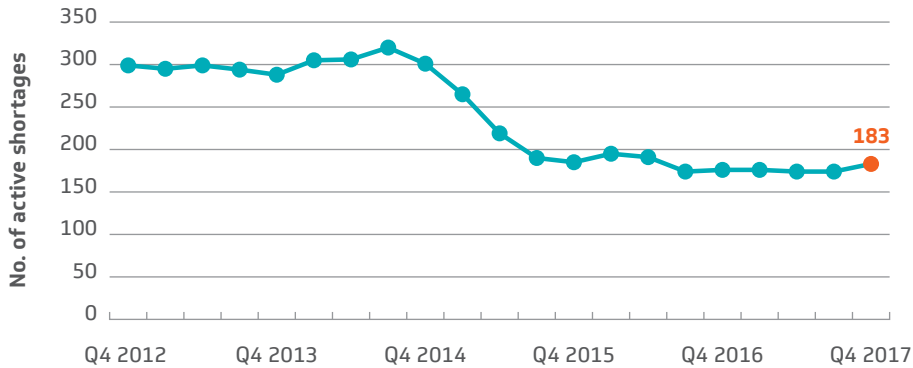
Top 10 noninfluenza vaccines

1	Pevnar	6	Proquad
2	Gardasil 9	7	Engerix B (Adult)
3	Pneumovax	8	Varivax
4	Boostrix	9	MMR
5	Adacel	10	Menactra

Hot topics

Drug shortages

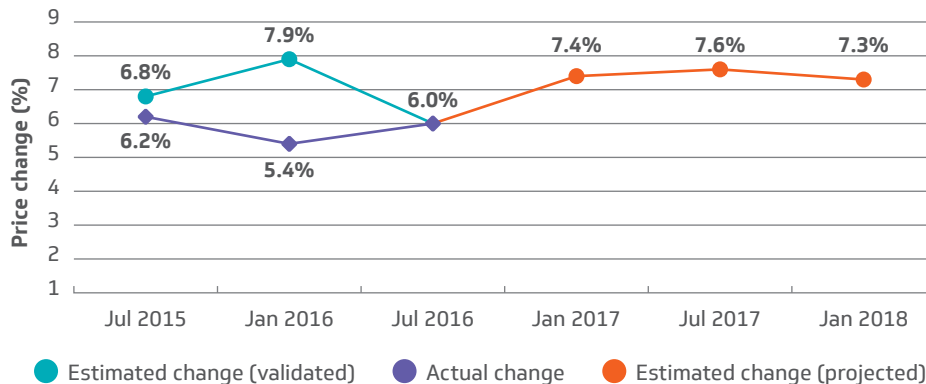
Drug shortages appear to have peaked, but the total is not trending down. Vizient continues to advocate on behalf of our members to our suppliers and government agencies.



How close were we?

To evaluate the accuracy of past Drug Price Forecast purchase projections, we compared the estimates made in three previous forecasts with the actual rate of drug price inflation (wholesale acquisition cost).

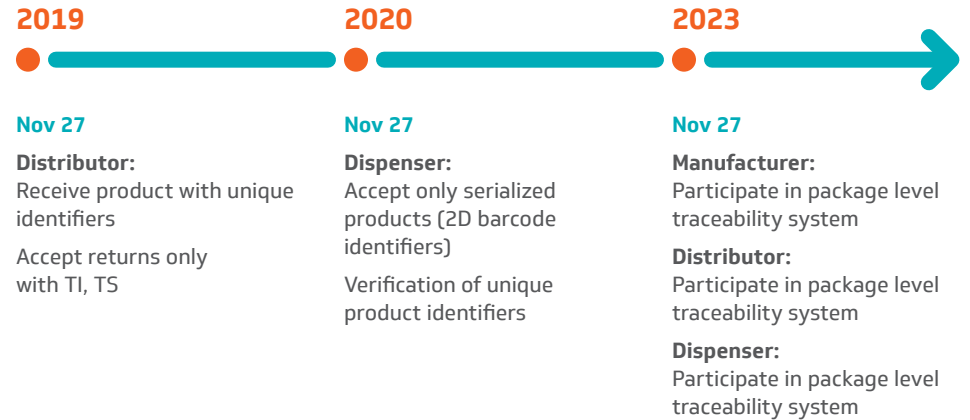
On average, our projections were found to be **within 1 percentage point** of actual inflation rates.



Upcoming regulation milestones

DSCSA

The Drug Supply Chain Security Act establishes a national system to trace certain prescription drugs as they are distributed and outlines a 10-year plan to build an electronic information exchange system to support drug tracking.



USP chapters <797> and <800>

These new drug compounding standards may require new construction or remodeling, as well as necessary steps to ensure staff safety from hazardous drug exposure

Deadline
Dec 1, 2019



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As the nation's largest member-driven health care performance improvement company, Vizient provides network-powered insights in the critical areas of clinical, operational, and supply chain performance and empowers members to deliver exceptional, cost-effective care.

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