



US Pharmaceutical Trends, Issues & Outlook for NACDS Regional Chain Conference

*Pharmacy Industry Trends
February 12, 2024*

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Prepared by: Mary Kate Newell, David Mennen, and Scott Biggs

The challenges facing our industry today are numerous

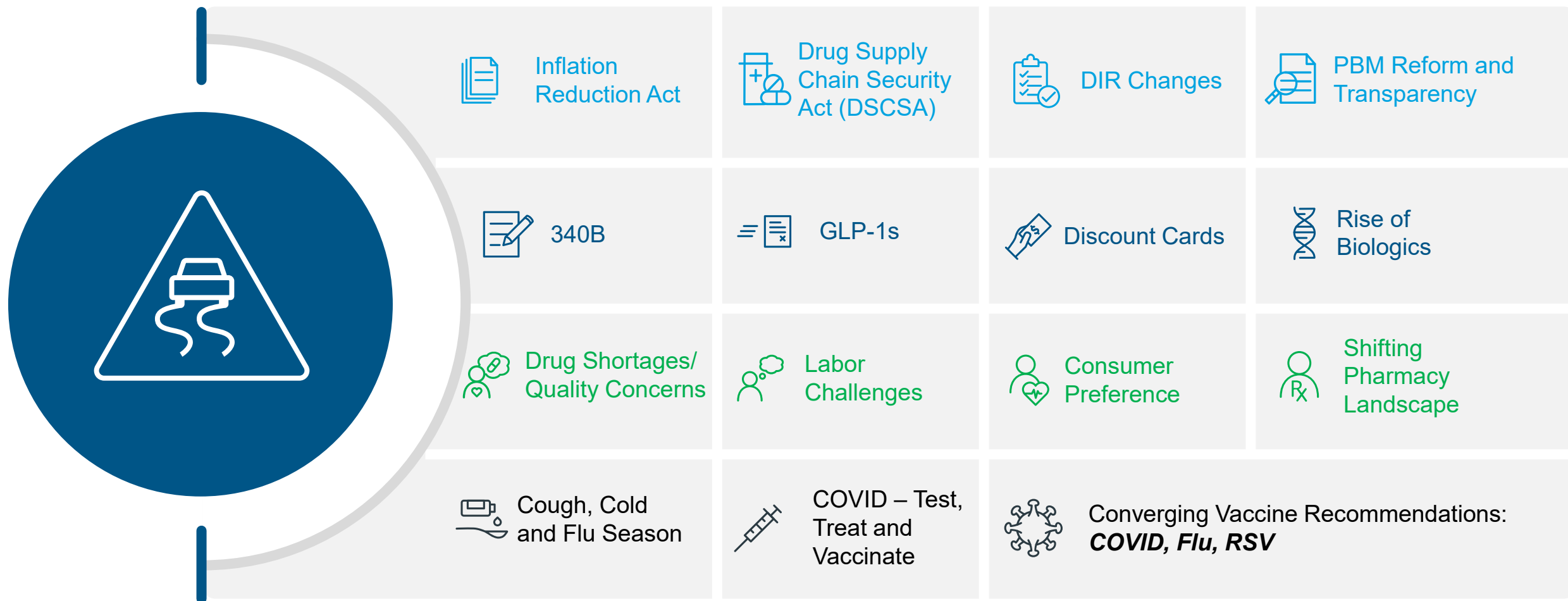




Table of contents

- + Market Trends: Utilization
- + Where are we now
- + Generics
- + Drug Shortages in the U.S
- + New Product Launch Update
- + Retail Performance
- + Cough, Cold and Flu Season and Vaccines Updates
- + GLP-1s
- + Outlook
- + Appendix

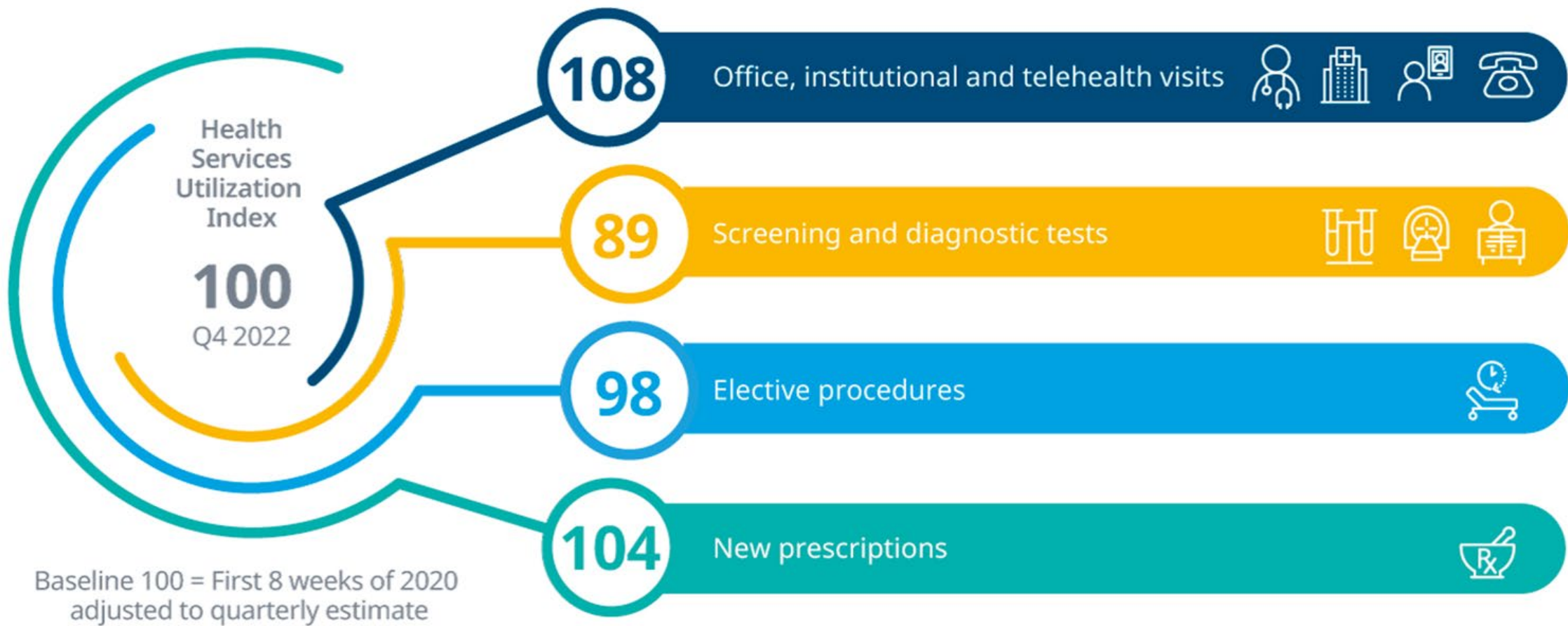
Market Trends: Utilization

Medical claims/activity



The Health Services Utilization Index indicates the U.S. is operating at pre-COVID-19 levels with shifts in utilization

Overview of Health Services Utilization Index



Source: IQVIA Institute; IQVIA Medical Claims Data; LAAD Prescription data, week ending 12/30/2022.
The Use of Medicines in the U.S. 2023: Usage and Spending Trends and Outlook to 2027. Report by the IQVIA Institute for Human Data Science.
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Antibiotic Use and Rising Antimicrobial Resistance

- **ADHD medicine** use **grew 11%** over the last 5 years to over 3Bn days of therapy in 2022
- **Women aged 20–64** now **account for 33%** of prescriptions, up from 27% in 2018



Mental Health in Young People

- **2.4Bn antibiotic days of therapy** in 2022 down 7% from pre-pandemic
- use in **children and older adults up 8%** in Q4 2022 from historic seasonal levels

Stimulant Use and Related Shortages



- **Mental health prescriptions** reached **567Mn** in 2022 up 9% since 2019
- Mental health prescriptions in **girls under 19 up 33%** since pre-pandemic to 17Mn in 2022

- **Over 500k GLP-1 agonist** new prescriptions across diabetes and obesity in February 2023, **up 152%** compared to prior year

Rising Use of Novel Obesity Drugs



- Per capita prescription **opioid use down 64%** since the peak in 2011
- Opioid overdose **deaths up 253%** since 2011

Combating the Opioid Overdose Epidemic



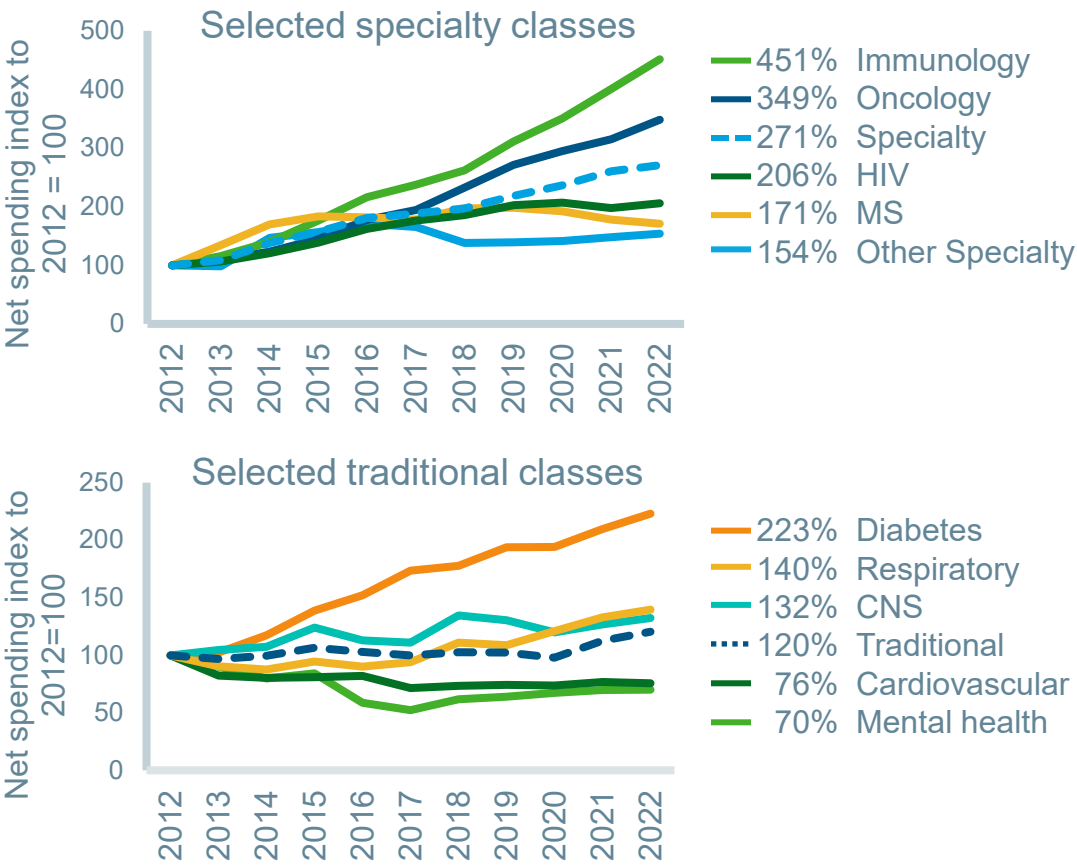
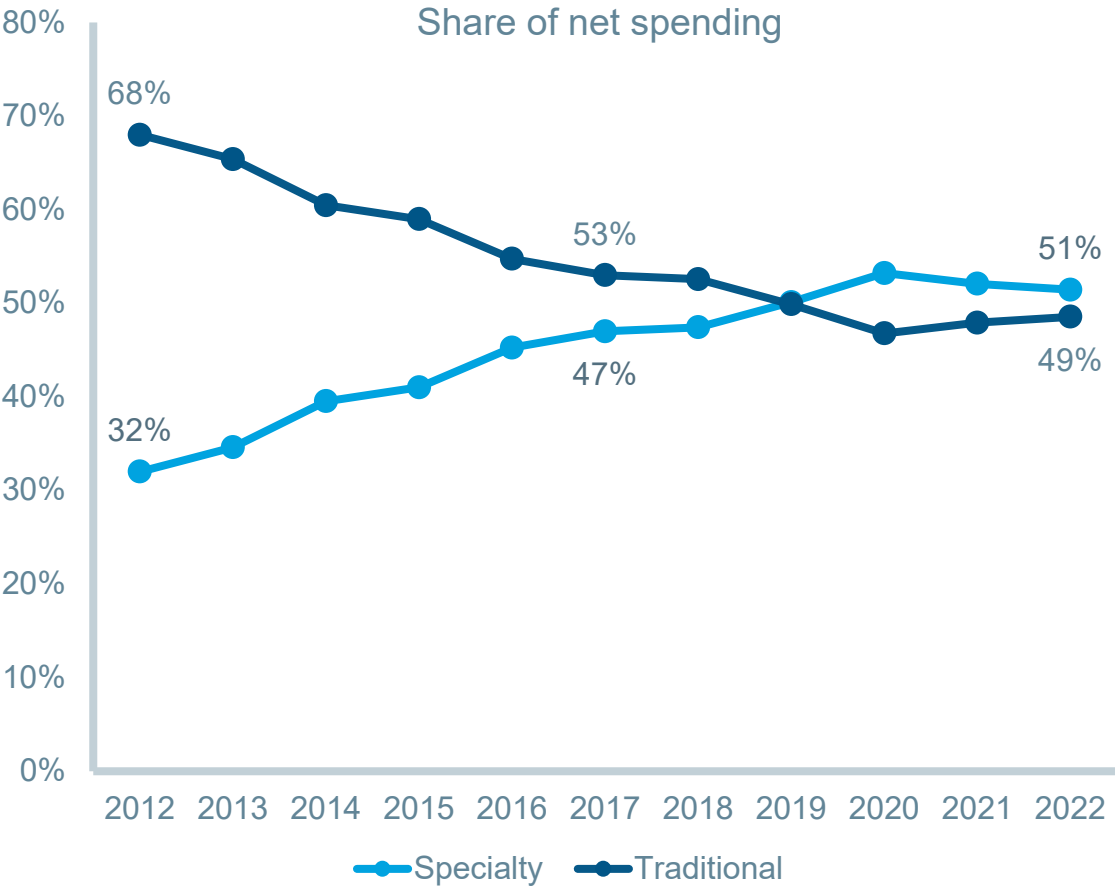
- **Contraception use down 6%** in 2022 with **100Mn fewer** days of therapy
- **Lower use of long-acting** birth control, such as IUDs and injectables

Concerning Gaps in Women's Health



Specialty medicines now account for 51% of spending, stable in the past 3 years as COVID treatments have lifted traditional

Share of spending at estimated net manufacturer prices



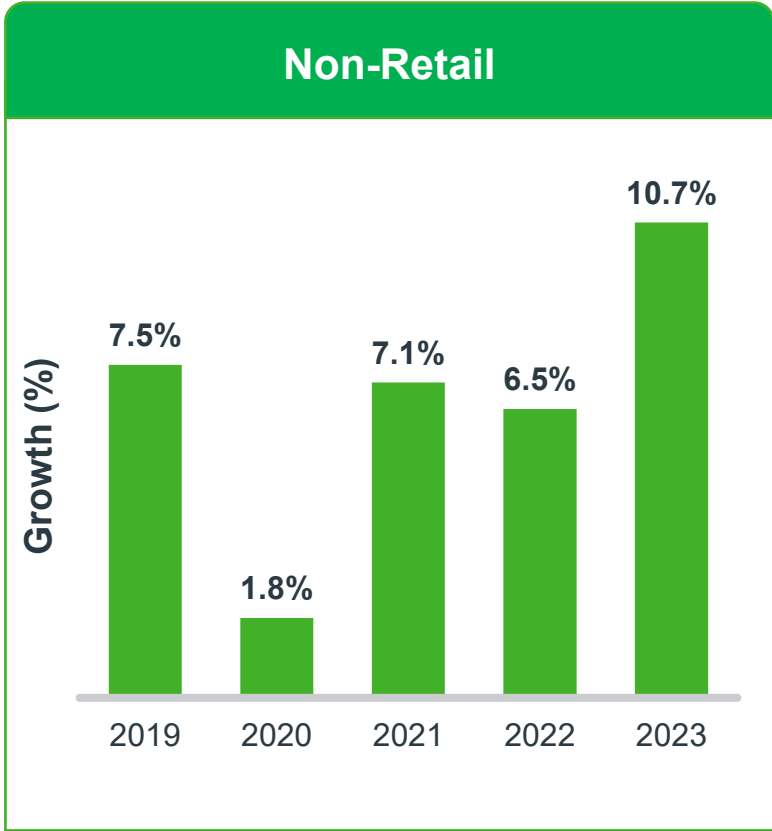
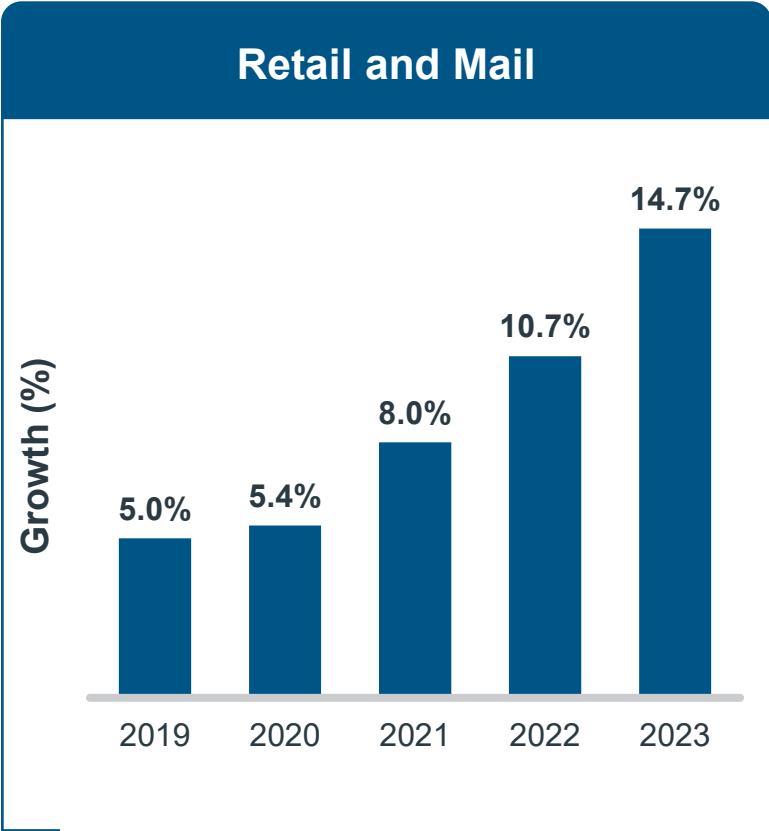
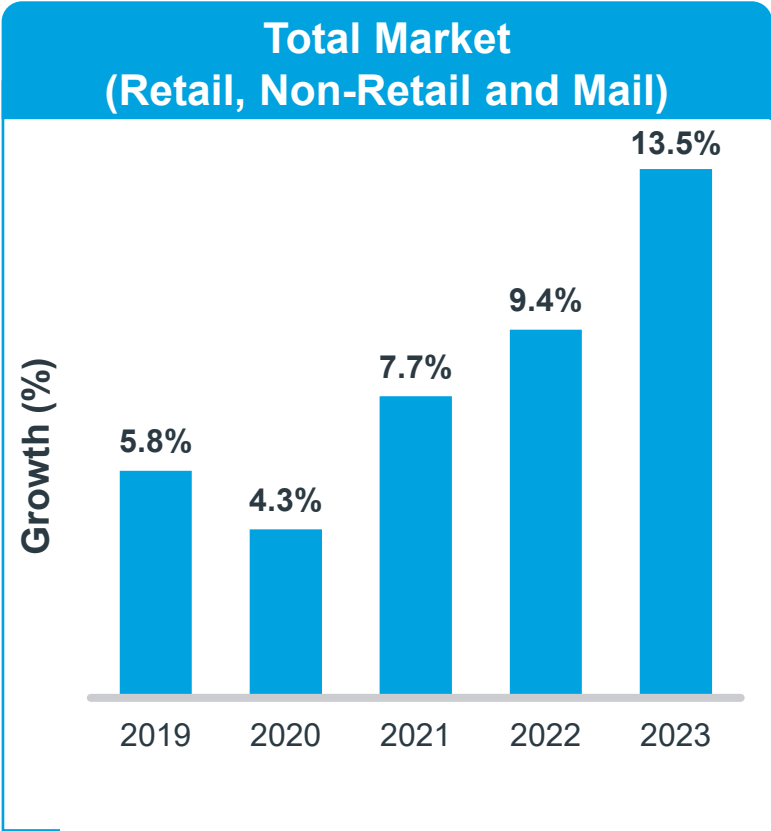
Source: IQVIA Institute, Mar 2023.
The Use of Medicines in the U.S. 2023: Usage and Spending Trends and Outlook to 2027. Report by the IQVIA Institute for Human Data Science.
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Where are we now?



The Non-Retail channel is recovering from effects of COVID-19

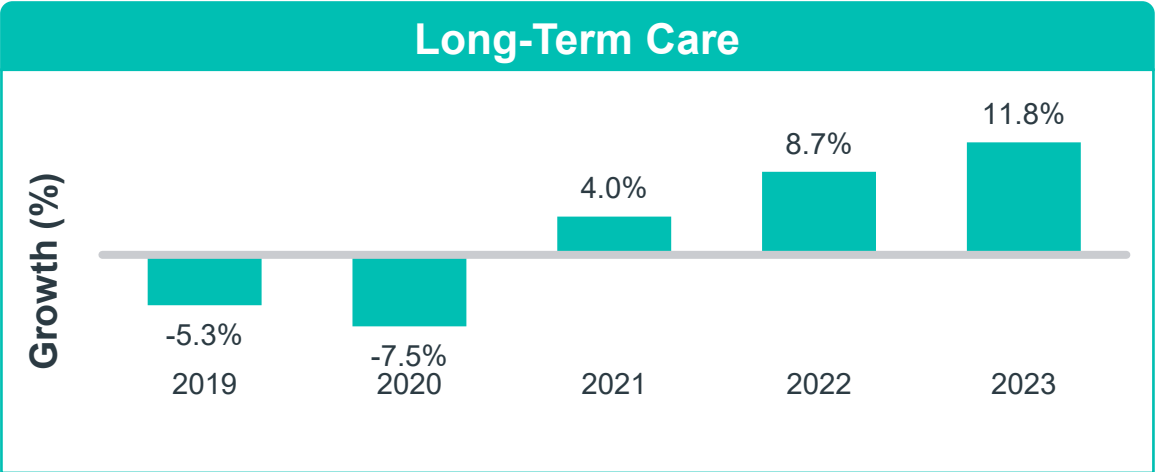
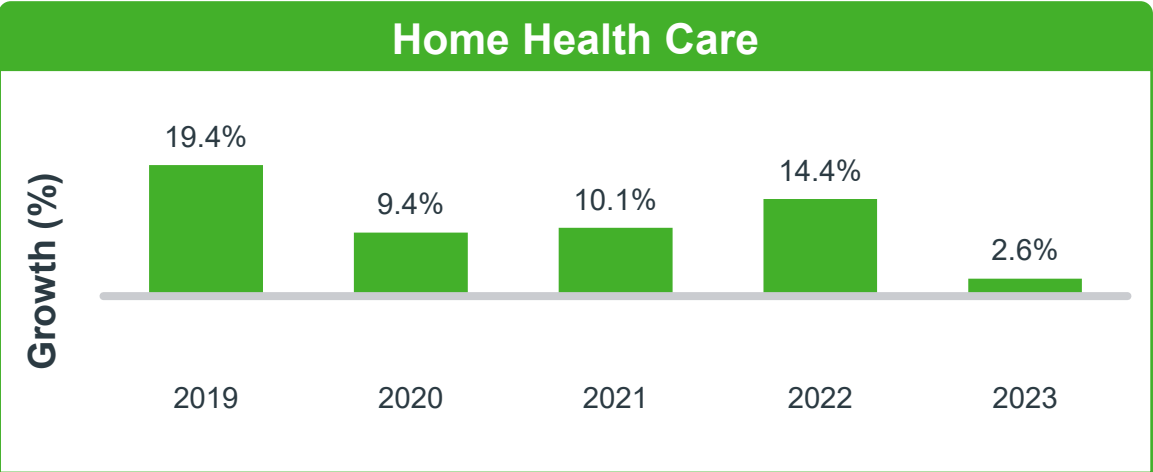
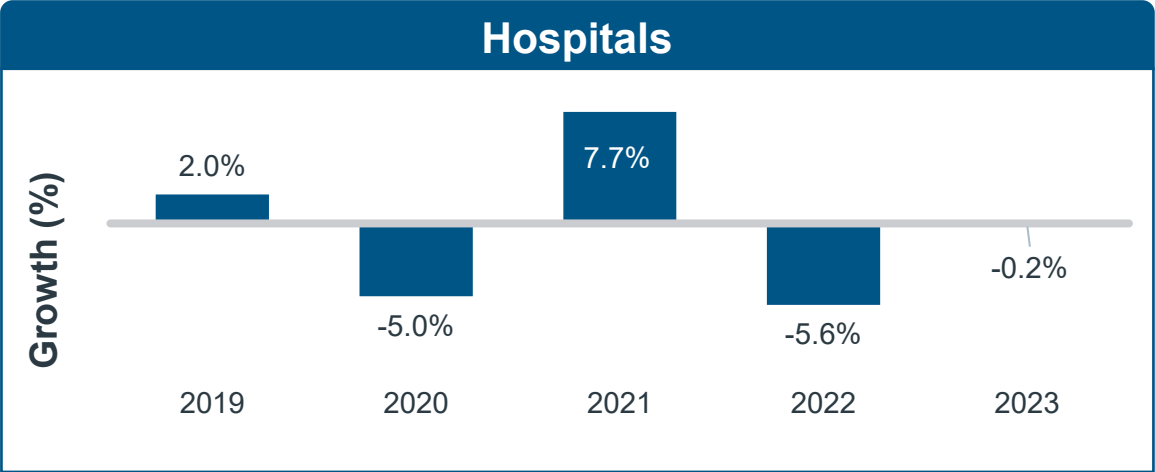
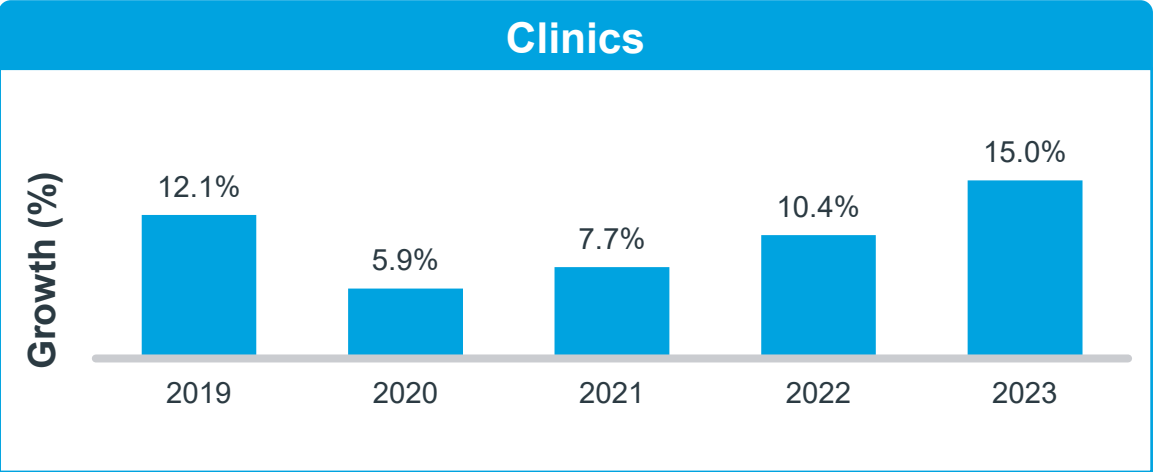
Growth (%) of Sales



Source: IQVIA, National Sales Perspectives, December 2023
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

Clinics and Long-Term Care sales growth is strong while Hospitals and Home Health Care are weak

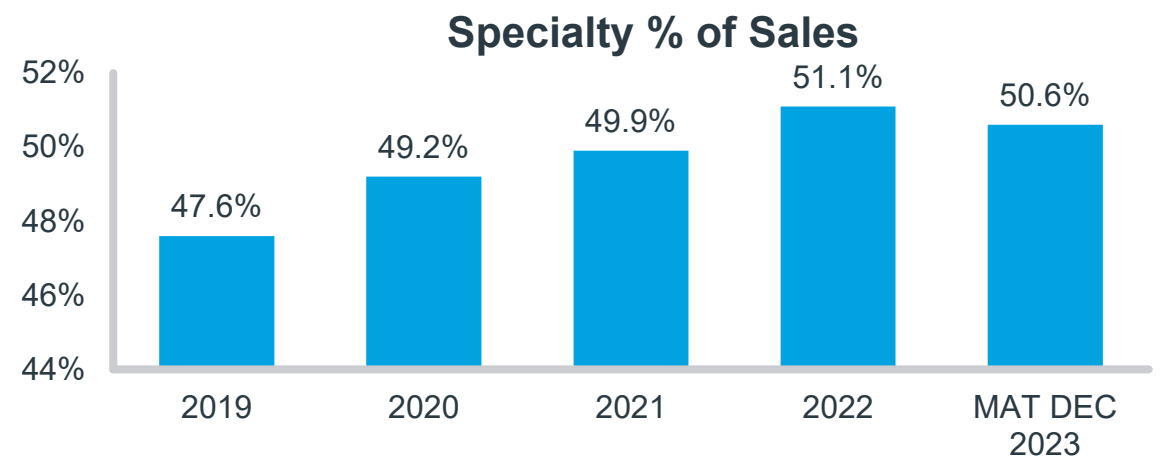
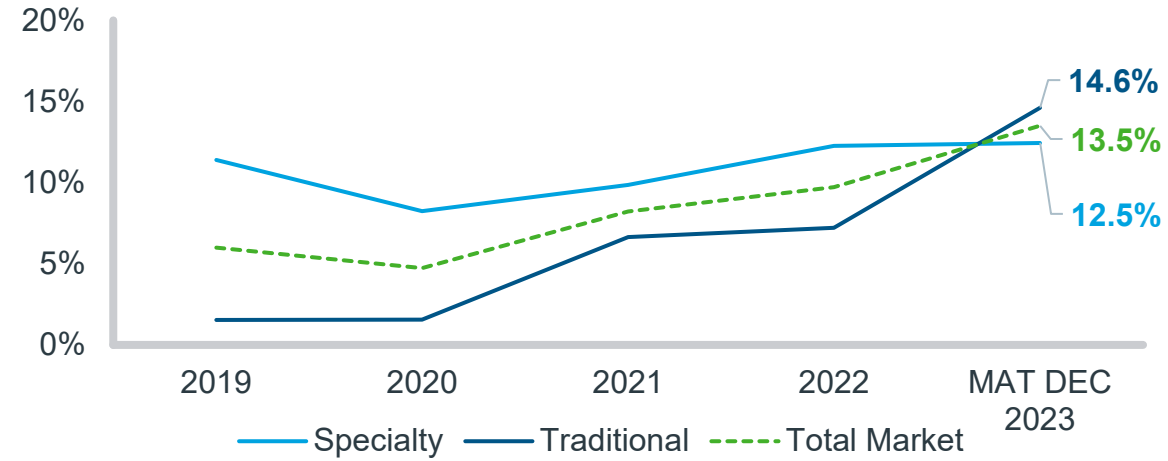
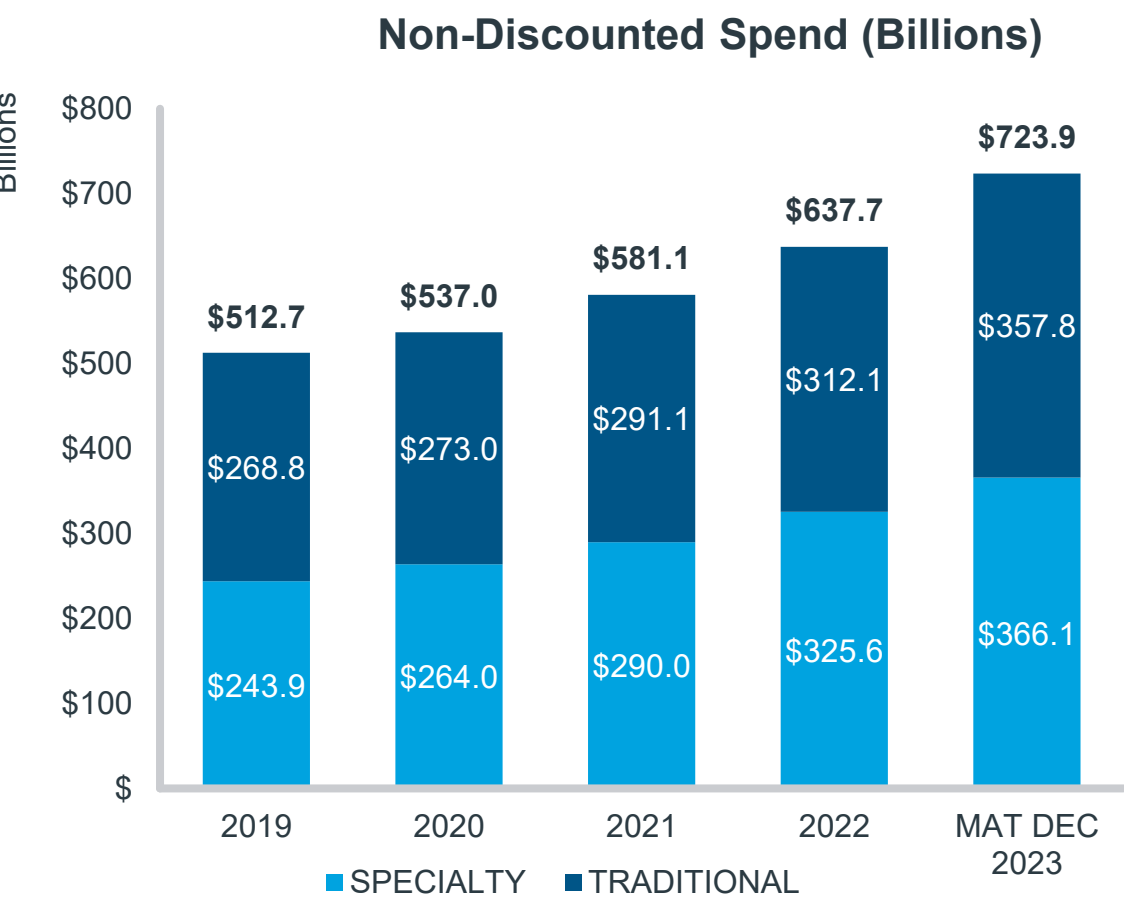
Growth (%) of Sales



Source: IQVIA, National Sales Perspectives, December 2023
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

For the total market, specialty growth is weaker than traditional growth for MAT Dec 2023

In MAT December 2023, specialty spend grew by 12.5% while traditional growth grew 14.6%



Source: IQVIA, National Sales Perspectives, December 2023

IQVIA Definition of a Specialty Drug

Specialty drugs at IQVIA are classified as products that meet the following criteria



Treats chronic, rare and/or complex diseases



Expensive (USD \$6K annual cost of therapy)



Initiated and maintained by a specialist



Unique distribution



Generally injectable and/or not self-administered



Requires extensive or in-depth monitoring/patient counseling



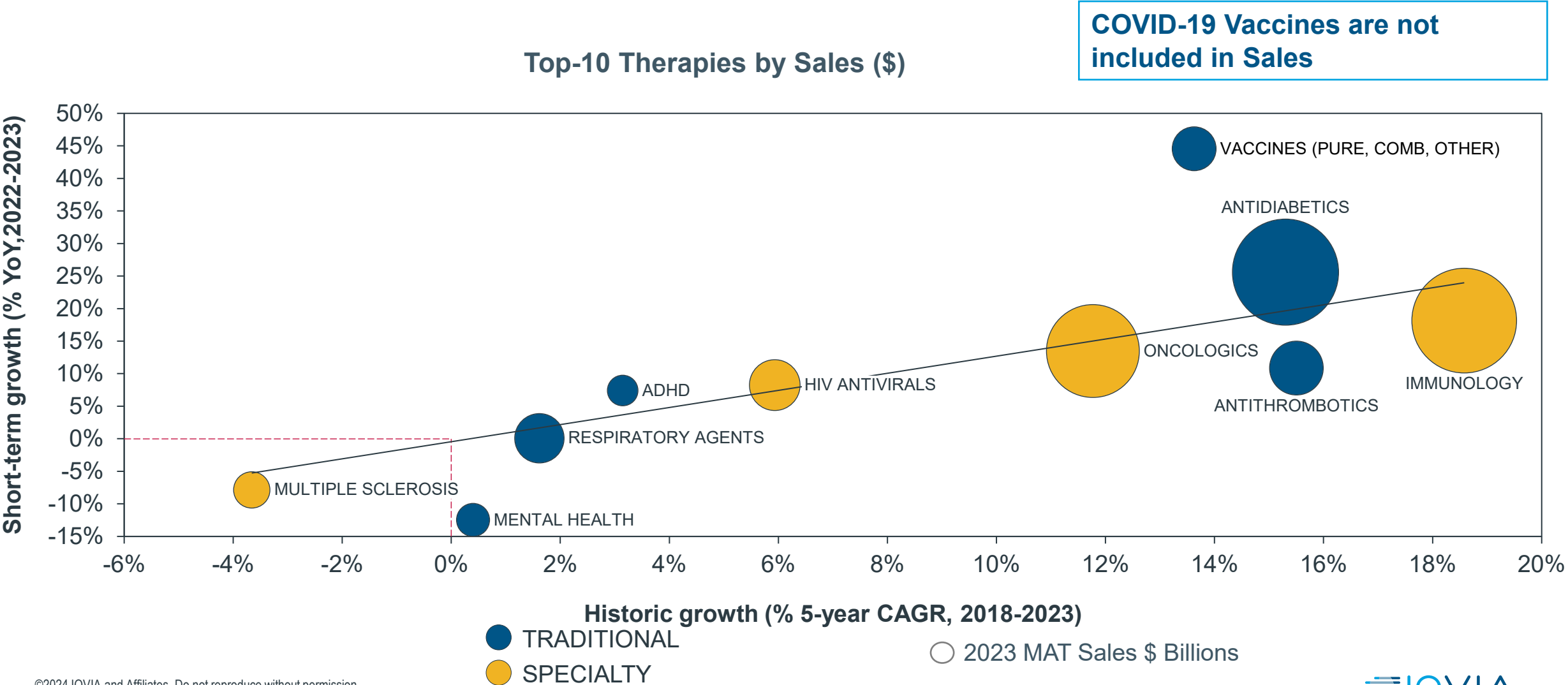
Products that require an additional level of care in their chain of custody



Requires reimbursement assistance

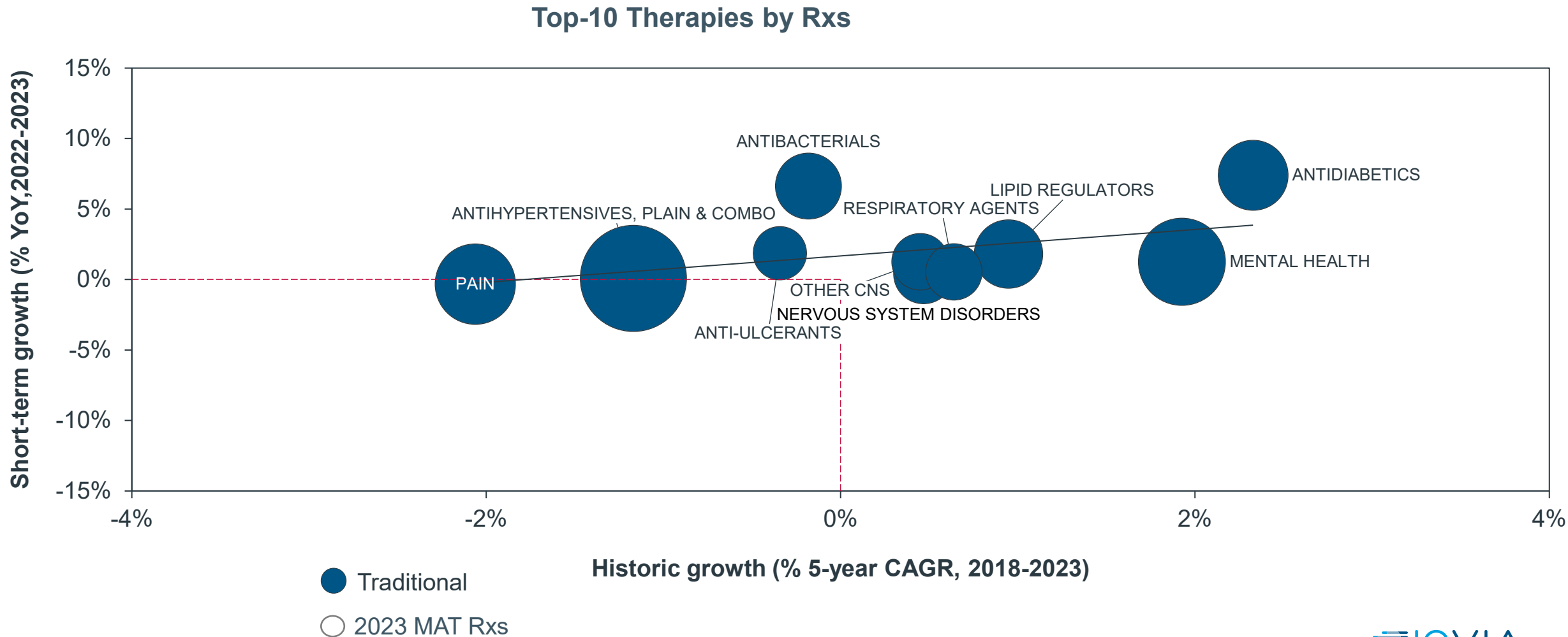
Immunology and Antithrombotics lead long-term growth

Vaccines lead short-term growth



Antidiabetics and Mental Health lead long-term growth while Antidiabetics lead short-term growth

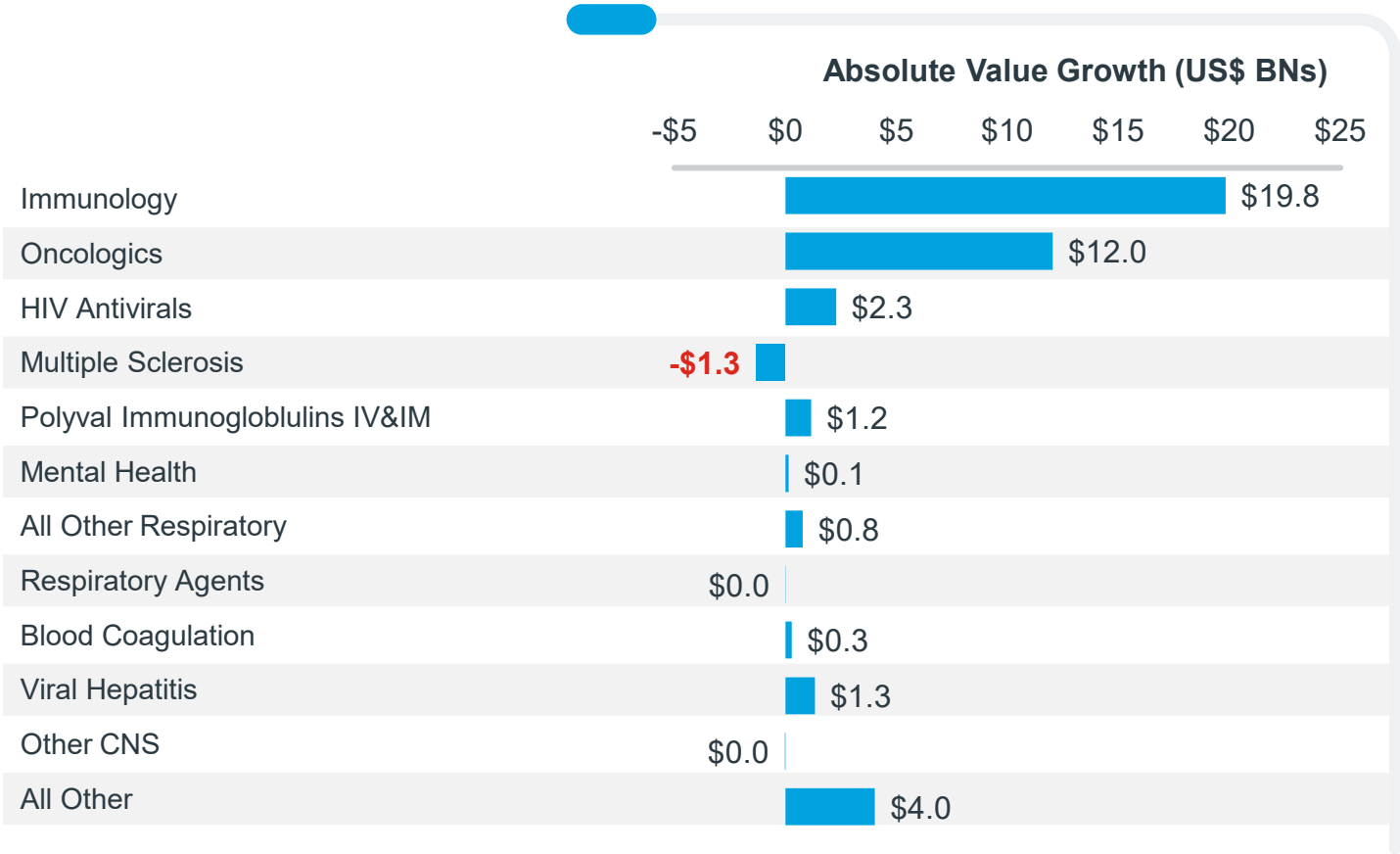
Traditional therapies command the Top 10 therapies by prescription



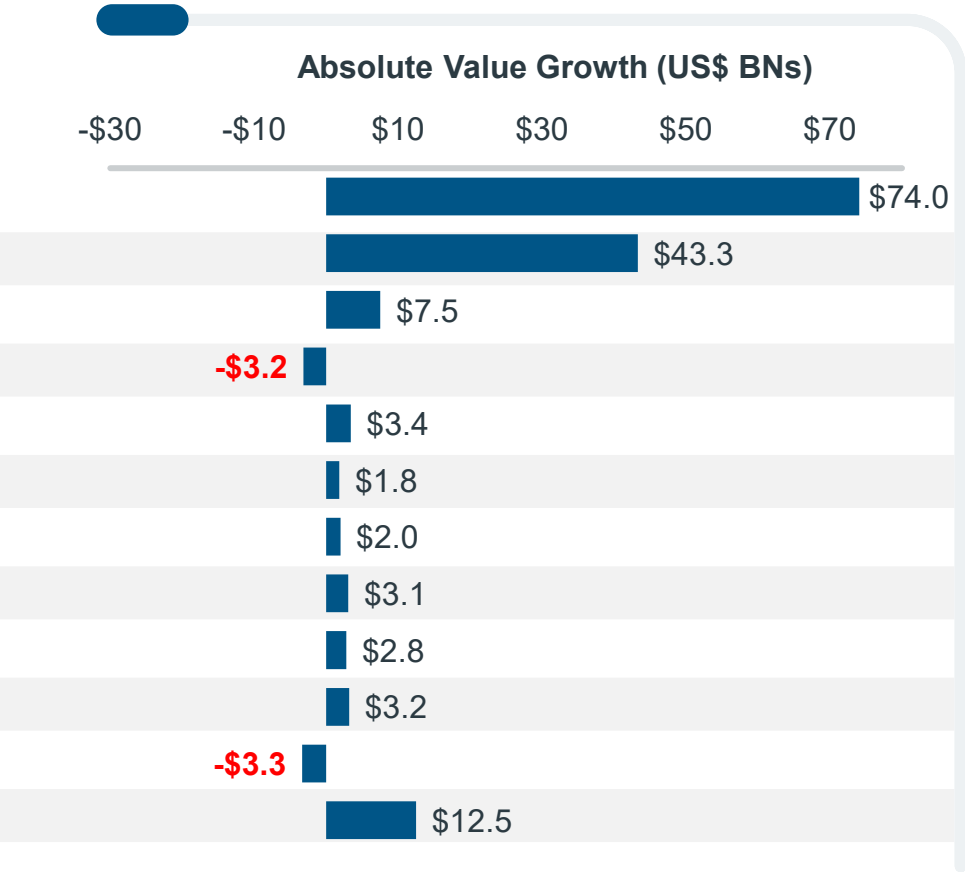
Immunology and Oncologic contributed the most absolute value growth for specialty therapy areas

Absolute Value Growth for Top Specialty Therapy Areas

ΔChange from MAT DEC 2022 to MAT DEC 2023



ΔChange from 2018 to MAT DEC 2023

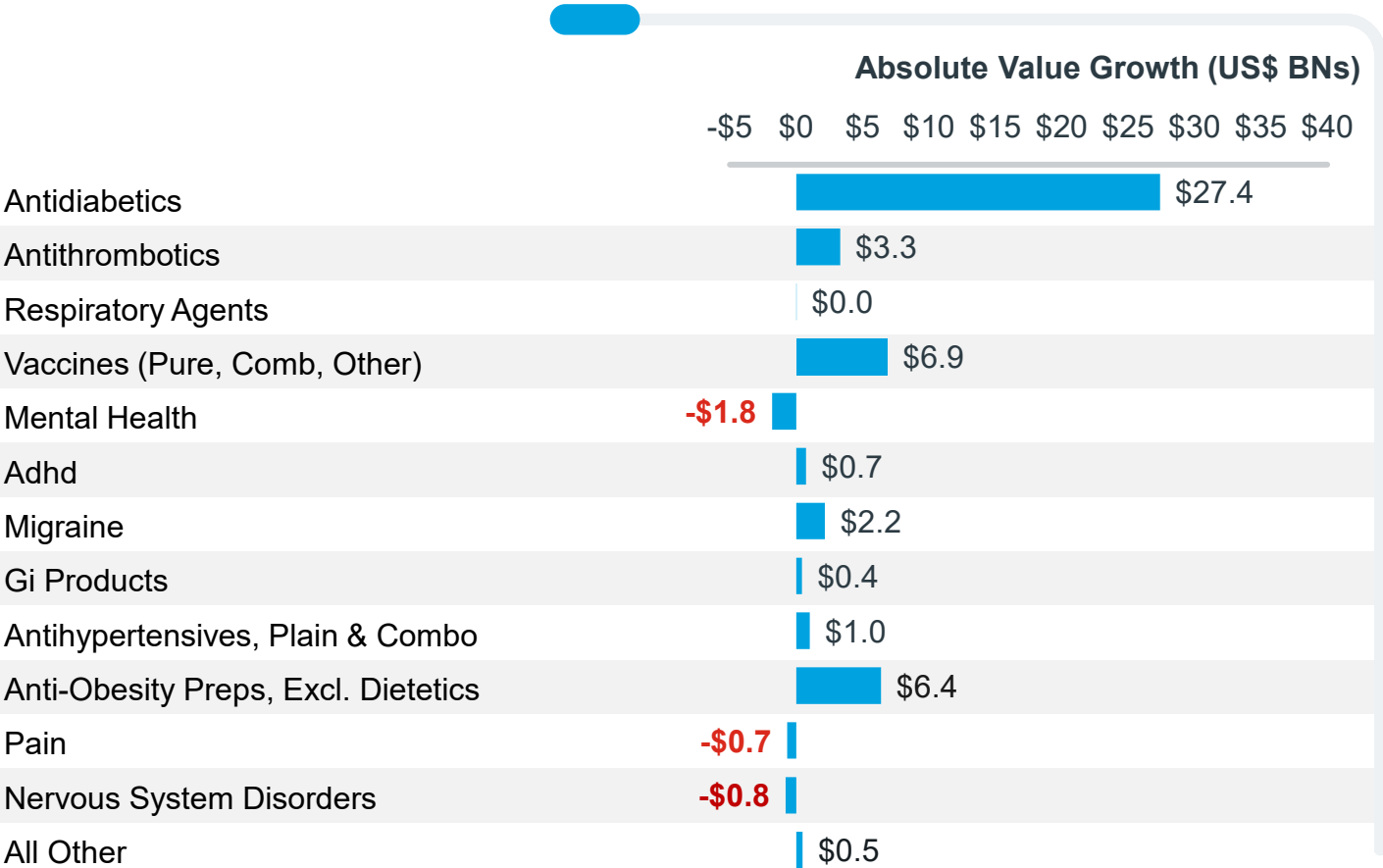


Source: IQVIA, National Sales Perspectives, December 2023
Note: top therapy areas ranked on MAT December 2022 non-discounted spend
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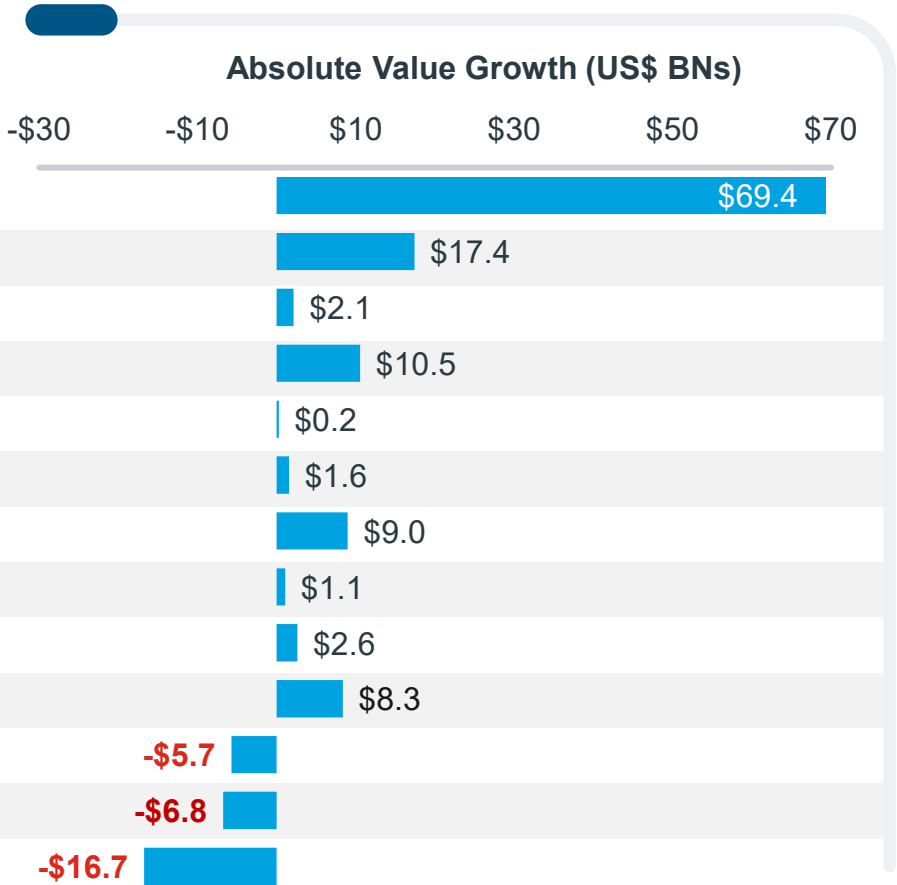
Antidiabetics and Antithrombotics lead absolute value growth for traditional therapy areas

Absolute Value Growth for Top Traditional Therapy Areas

ΔChange from MAT DEC 2022 to MAT DEC 2023



ΔChange from 2018 to MAT DEC 2023



Source: IQVIA, National Sales Perspectives, December 2023
Note: top therapy areas ranked on MAT December 2022 non-discounted spend
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The top 10 traditional therapy areas are growing at 20.3% and account for 38.2% market share

Rank	Therapy Area	Non-Discounted Spend (US\$ BNs)				
		MAT DEC 2023	Market Share	Traditional Market Share	ABS Growth	Growth
1	ANTIDIABETICS	\$130.1	<div></div> 18.0%	36.4%	\$27.4	<div></div> 26.7%
2	ANTITHROMBOTICS	\$33.8	<div></div> 4.7%	9.4%	\$3.3	<div></div> 10.9%
3	RESPIRATORY AGENTS	\$28.4	<div></div> 3.9%	7.9%	\$0.0	<div></div> 0.1%
4	VACCINES (PURE, COMB, OTHER)	\$22.3	<div></div> 3.1%	6.2%	\$6.9	<div></div> 44.6%
5	MENTAL HEALTH	\$12.6	<div></div> 1.7%	3.5%	-\$1.8	-12.5% <div></div>
6	ADHD	\$10.8	<div></div> 1.5%	3.0%	\$0.7	<div></div> 7.4%
7	MIGRAINE	\$10.3	<div></div> 1.4%	2.9%	\$2.2	<div></div> 26.8%
8	GI PRODUCTS	\$9.6	<div></div> 1.3%	2.7%	\$0.4	<div></div> 4.9%
9	ANTIHYPERTENSIVES, PLAIN & COMBO	\$9.5	<div></div> 1.3%	2.7%	\$1.0	<div></div> 11.9%
10	ANTI-OBESITY PREPS, EXCL. DIETETICS	\$9.2	<div></div> 1.3%	2.6%	\$6.4	<div></div> 230.3%
TOP 10		\$276.6	<div></div> 38.2%	77.3%	\$46.6	<div></div> 20.3%

Source: IQVIA, National Sales Perspectives, December 2023
Limited to Rx and OTC Insulins
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The top 20 therapy areas are growing at 15.5% and account for 85.2% market share

Rank	Therapy Area	Non-Discounted Spend (US\$ BNs)			
		MAT DEC 2023	Market Share	ABS Growth	Growth
11	PAIN	\$10.7	<div></div> 1.5%	-\$0.5	-4.6% <div></div>
12	OTHER CNS	\$10.1	<div></div> 1.5%	\$1.5	<div></div> 16.1%
13	MIGRAINE	\$9.8	<div></div> 1.4%	\$2.2	<div></div> 26.8%
14	GI PRODUCTS	\$9.7	<div></div> 1.4%	\$0.5	<div></div> 5.2%
15	ANTIHYPERTENSIVES, PLAIN & COMBO	\$9.6	<div></div> 1.4%	\$1.0	<div></div> 11.6%
16	ANTI-OBESITY PREPS, EXCL. DIETETICS	\$8.9	<div></div> 1.3%	\$6.4	<div></div> 230.3%
17	OTHER CARDIOVASCULARS	\$7.8	<div></div> 1.2%	\$0.5	<div></div> 5.6%
18	NERVOUS SYSTEM DISORDERS	\$7.3	<div></div> 1.1%	-\$0.8	-9.5% <div></div>
19	DERMATOLOGICS	\$6.4	<div></div> 0.9%	\$0.1	<div></div> 0.9%
20	BLOOD COAGULATION	\$6.3	<div></div> 0.9%	\$0.3	<div></div> 5.7%
TOP 20		\$592.0	<div></div> 85.2%	\$82.5	<div></div> 15.5%

Source: IQVIA, National Sales Perspectives, December 2023
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The top 10 products are growing at 30.1% and account for 25.4% market share

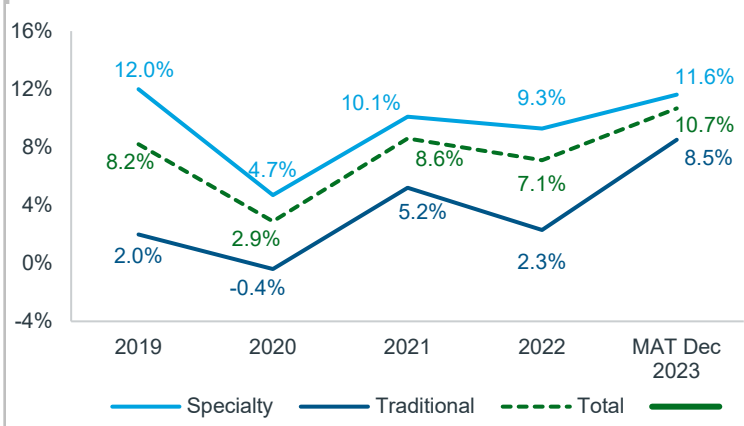
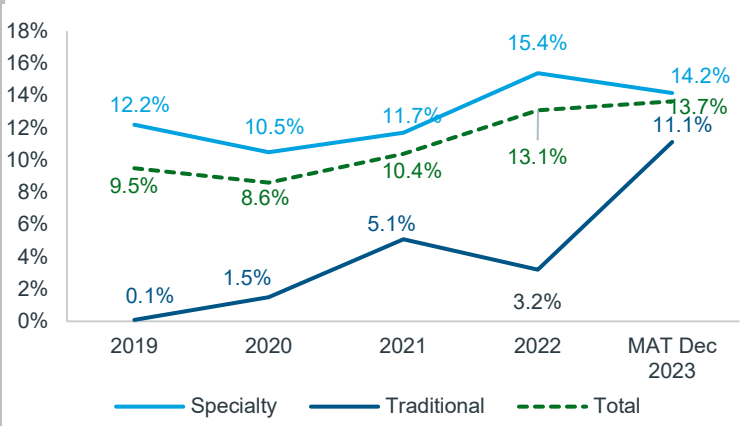
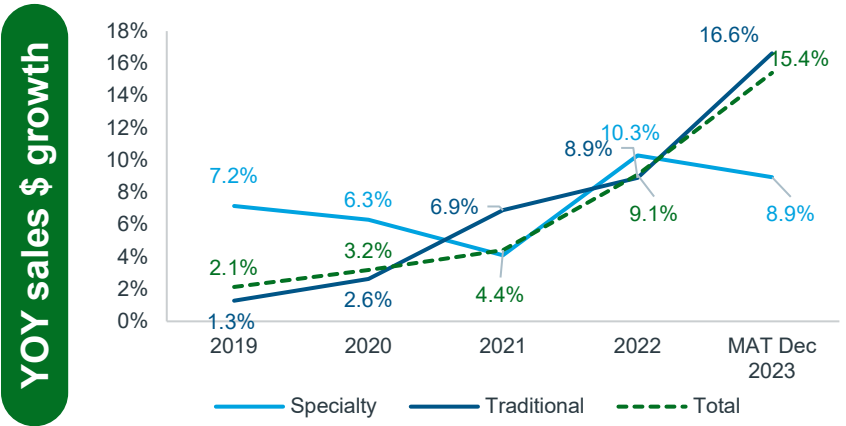
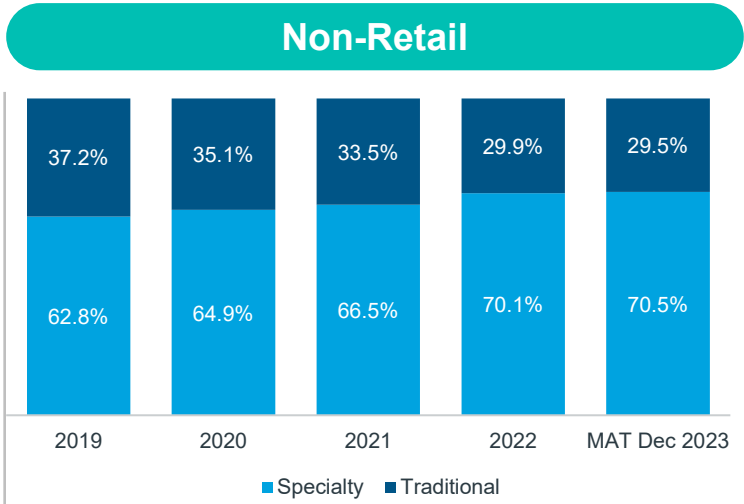
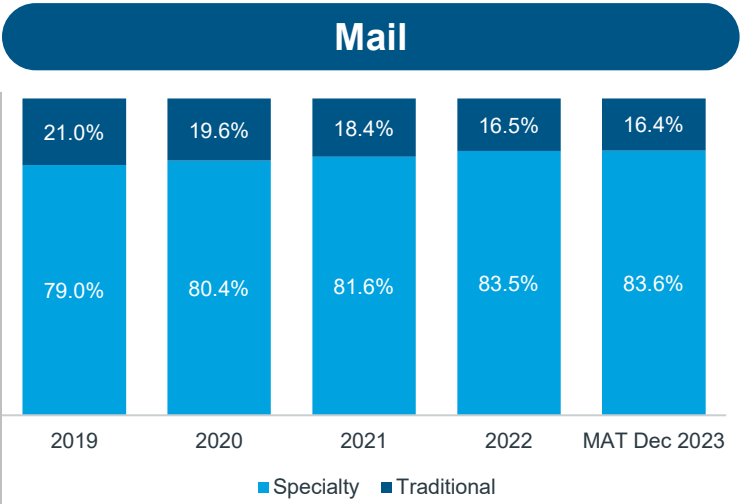
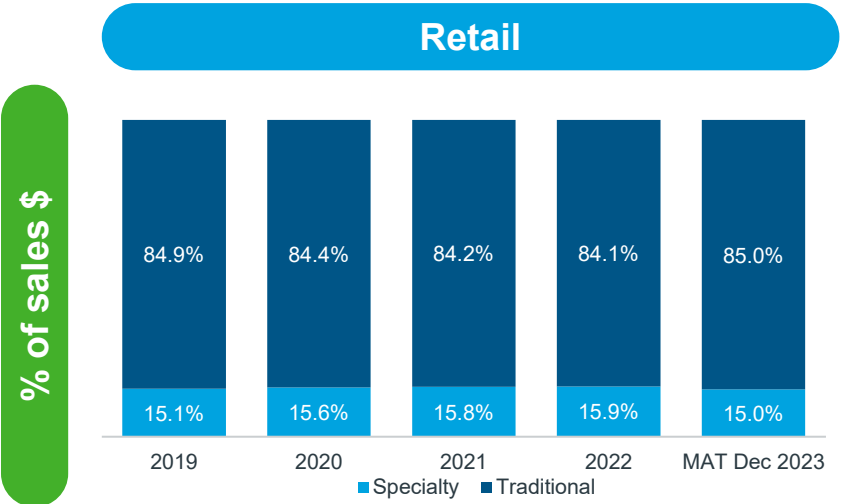
Rank	Product	Non-Discounted Spend (US\$ BNs)			
		MAT DEC 2023	Market Share	ABS Growth	Growth
1	HUMIRA	\$34.2	<div></div> 4.7%	\$2.9	<div></div> 9.3%
2	OZEMPIC	\$26.8	<div></div> 3.7%	\$11.8	<div></div> 78.7%
3	ELIQUIS	\$22.1	<div></div> 3.1%	\$3.2	<div></div> 17.1%
4	TRULICITY	\$16.3	<div></div> 2.3%	\$0.8	<div></div> 5.1%
5	JARDIANCE	\$15.9	<div></div> 2.2%	\$4.0	<div></div> 34.0%
6	STELARA	\$15.9	<div></div> 2.2%	\$1.9	<div></div> 14.0%
7	KEYTRUDA	\$15.4	<div></div> 2.1%	\$2.5	<div></div> 19.1%
8	BIKTARVY	\$13.2	<div></div> 1.8%	\$1.6	<div></div> 14.2%
9	MOUNJARO	\$13.0	<div></div> 1.8%	\$10.3	<div></div> 368.8%
10	DUPIXENT	\$11.5	<div></div> 1.6%	\$3.6	<div></div> 44.9%
TOP 10		\$184.2	<div></div> 25.4%	\$42.6	<div></div> 30.1%

Source: IQVIA, National Sales Perspectives, December 2023
Limited to Rx and OTC Insulins
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The top 20 products are growing at 30.4% and account for 35.3% market share

Rank	Product	Non-Discounted Spend (US\$ BNs)			
		MAT DEC 2023	Market Share	ABS Growth	Growth
11	SKYRIZI	\$10.1	<div><div></div></div> 1.4%	\$5.2	<div><div></div></div> 106.3%
12	ENBREL	\$9.5	<div><div></div></div> 1.3%	\$0.6	<div><div></div></div> 6.9%
13	XARELTO	\$8.3	<div><div></div></div> 1.1%	\$0.2	<div><div></div></div> 1.9%
14	FARXIGA	\$7.9	<div><div></div></div> 1.1%	\$2.3	<div><div></div></div> 41.8%
15	WEGOVY	\$7.8	<div><div></div></div> 1.1%	\$6.2	<div><div></div></div> 409.6%
16	JANUVIA	\$5.7	<div><div></div></div> 0.8%	-\$0.6	<div><div></div></div> -9.4%
17	TRELEGY ELLIPTA	\$5.7	<div><div></div></div> 0.8%	\$1.3	<div><div></div></div> 28.8%
18	OPDIVO	\$5.4	<div><div></div></div> 0.8%	\$0.5	<div><div></div></div> 9.8%
19	TALTZ	\$5.3	<div><div></div></div> 0.7%	\$0.7	<div><div></div></div> 16.2%
20	OCREVUS	\$5.3	<div><div></div></div> 0.7%	\$0.5	<div><div></div></div> 11.0%
TOP 20		\$255.2	<div><div></div></div> 35.3%	\$59.6	<div><div></div></div> 30.4%

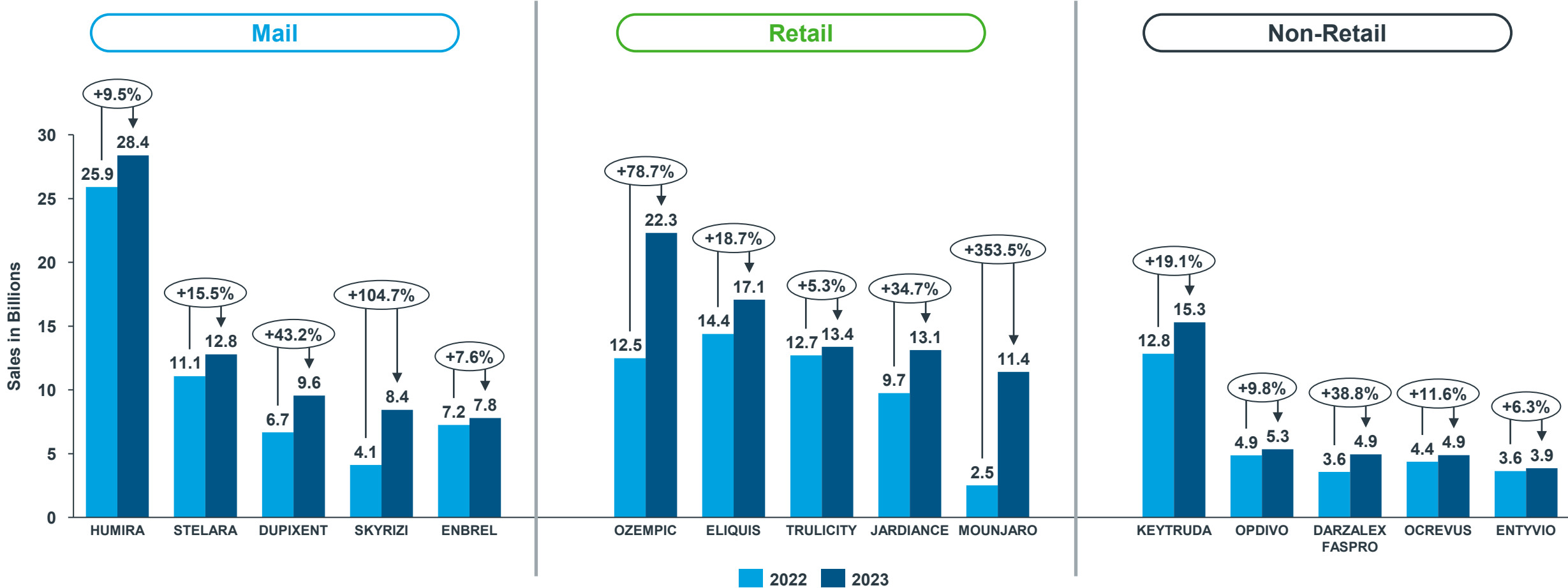
Based on sales dollars, Specialty is increasing in Non-Retail



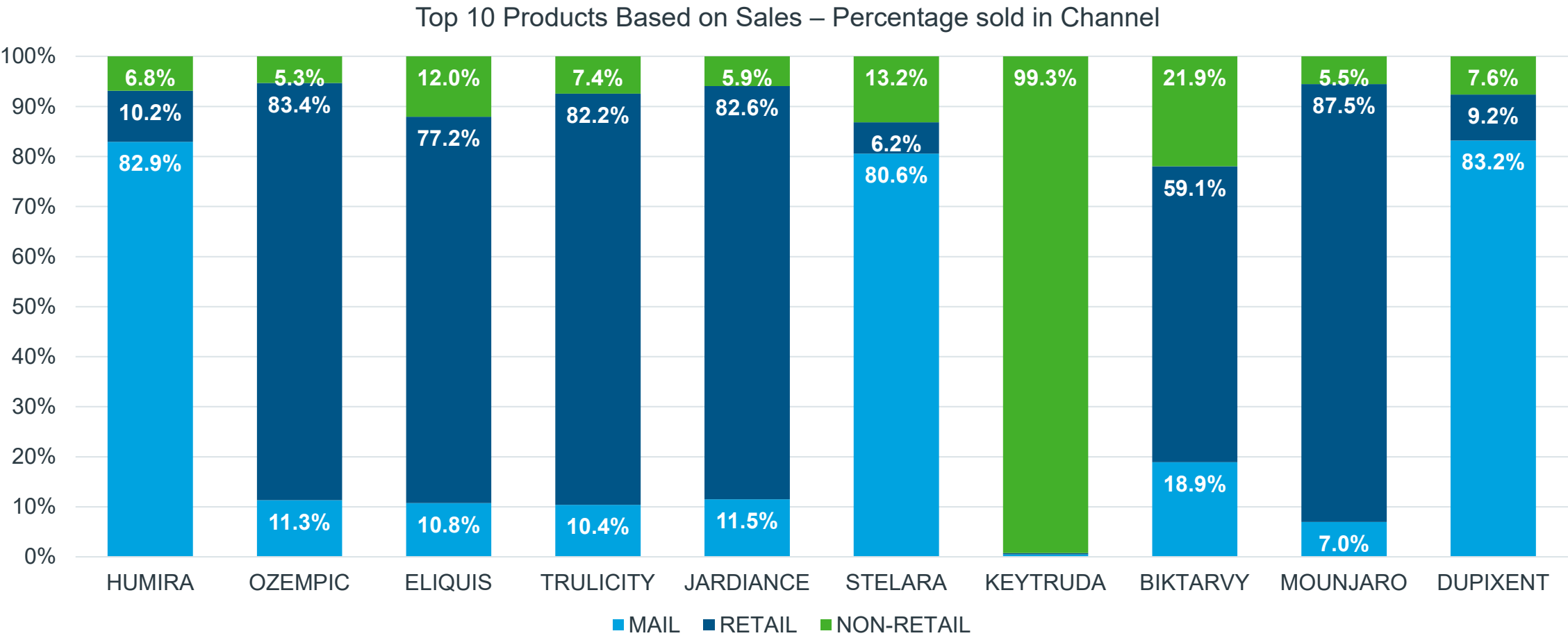
Data is based on Rx and OTC Insulins only

Humira is the top product in Mail, while it is Ozempic in Retail and Keytruda in Non-Retail

Top 5 Products by Channel based on Sales



Four of the top six products are prevalent in Retail



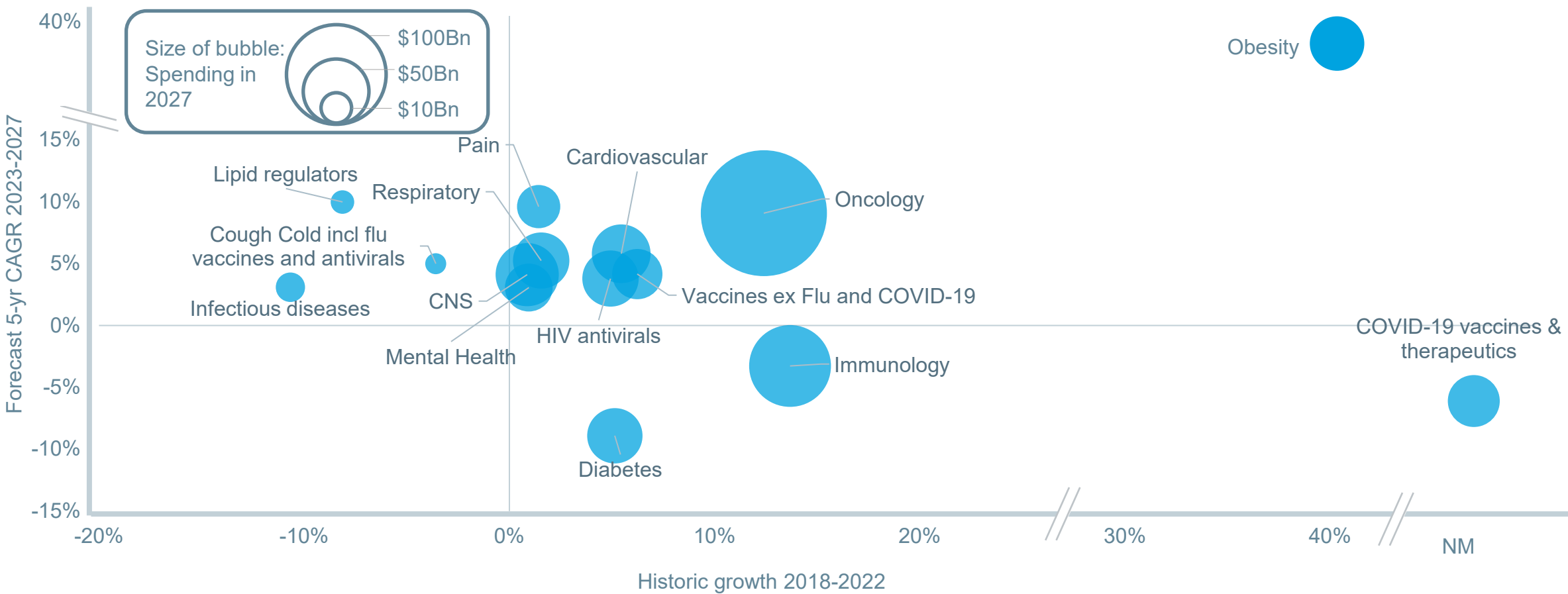
It may be time to redefine what a blockbuster drug is as there are now 136 of them

Products with sales greater than \$1 Bn US in 2023

Rank	Product	Sales (Bn)	Rank	Product	Sales (Bn)	Rank	Product	Sales (Bn)	Rank	Product	Sales (Bn)	Rank	Product	Sales (Bn)	Rank	Product	Sales (Bn)
1	HUMIRA	34.2	26	LANTUS SOLOSTAR	4.2	51	HEMLIBRA	2.4	76	XELJANZ XR	1.8	101	CREON 36	1.4	126	MAVYRET	1.1
2	OZEMPIC	26.8	27	COSENTYX 2 PEN	4.1	52	SHINGRIX	2.3	77	SPIKEVAX	1.7	102	TYSABRI	1.3	127	PRIVIGEN	1.1
3	ELIQUIS	22.1	28	ENTYVIO	4.1	53	PREVNAR 20	2.3	78	AREXVY	1.7	103	EPCLUSA	1.3	128	KRYSTEXXA	1.1
4	TRULICITY	16.3	29	RYBELSUS	4.1	54	GENVOYA	2.3	79	TRIUMEQ	1.7	104	EPINEPHRINE	1.3	129	SUBOXONE	1.1
5	JARDIANCE	15.9	30	OTEZLA	3.9	55	VABYSMO	2.2	80	ACTEMRA	1.7	105	TRINTELLIX	1.3	130	BREZTRI AEROSPHERE	1.1
6	STELARA	15.9	31	VRAYLAR	3.6	56	IMFINZI	2.2	81	VICTOZA 3-PAK	1.6	106	ERLEADA	1.3	131	LYNPARZA	1.1
7	KEYTRUDA	15.4	32	IBRANCE	3.6	57	CIMZIA	2.2	82	REMICADE	1.6	107	FLUZONE HD QUADRI	1.3	132	OMNIPOD 5	1.1
8	BIKTARVY	13.2	33	SYMBICORT	3.6	58	TECENTRIQ	2.2	83	XGEVA	1.6	108	FLOVENT HFA	1.3	133	BRIDION	1.1
9	MOUNJARO	13.0	34	DESCOVY	3.5	59	TAGRISSO	2.1	84	ENHERTU	1.6	109	BRILINTA	1.3	134	XIIDRA	1.0
10	DUPIXENT	11.5	35	ORENCIA	3.2	60	REVLIMID	2.1	85	DOVATO	1.6	110	ODEFSEY	1.3	135	GONAL-F RFF	1.0
11	SKYRIZI	10.1	36	TRESIBA	3.1	61	COMIRNATY	2.1	86	PERJETA	1.6	111	GARDASIL 9	1.2	136	ANORO ELLIPTA	1.0
12	ENBREL	9.5	37	XOLAIR	3.0	62	ADVAIR DISKUS	2.1	87	BENLYSTA	1.5	112	AIMOVIG	1.2			
13	XARELTO	8.3	38	NURTEC	3.0	63	UBRELVY	2.0	88	LEVEMIR FLEXPEN	1.5	113	SYNTHROID	1.2			
14	FARXIGA	7.9	39	PROLIA	3.0	64	XTANDI	2.0	89	BASAGLAR KWIKPEN	1.5	114	VYNDAMAX	1.2			
15	WEGOVY	7.8	40	IMBRUVICA	2.9	65	HUMALOG	1.9	90	NUCALA	1.5	115	ALBUTEROL HFA	1.2			
16	JANUVIA	5.7	41	LINZESS	2.9	66	CALQUENCE	1.9	91	EMGALITY	1.5	116	PROMACTA	1.2			
17	TRELEGY ELLIPTA	5.7	42	VERZENIO	2.9	67	BREO ELLIPTA	1.9	92	NEULASTA	1.5	117	AUSTEDO	1.2			
18	OPDIVO	5.4	43	INVEGA SUSTENNA	2.8	68	RESTASIS	1.9	93	POMALYST	1.4	118	JANUMET	1.2			
19	TALTZ	5.3	44	NOVOLOG FLEXPEN	2.8	69	GAMMAGARD LIQUID	1.9	94	YERVOY	1.4	119	LENVIMA	1.2			
20	OCREVUS	5.3	45	MYRBETRIQ	2.6	70	NOVOLOG	1.9	95	TRADJENTA	1.4	120	FASENRA	1.2			
21	ENTRESTO	5.0	46	TRIKAFTA	2.6	71	REXULTI	1.8	96	CABOMETYX	1.4	121	GAMUNEX-C	1.2			
22	DARZALEX FASPRO	5.0	47	OFEV	2.5	72	KESIMPTA	1.8	97	LENALIDOMIDE	1.4	122	QULIPTA	1.2			
23	TREMFYA	5.0	48	HUMALOG KWIKPEN	2.5	73	REPATHA SURECLICK	1.8	98	SPIRIVA RESPIMAT	1.4	123	VENCLEXTA	1.1			
24	VYVANSE	4.7	49	XIFAXAN	2.4	74	INGREZZA	1.8	99	SYM TUZA	1.4	124	ABILIFY MAINTENA	1.1			
25	RINVOQ	4.4	50	DEXCOM G6	2.4	75	SPRYCEL	1.8	100	TIVICAY	1.4	125	RITUXAN	1.1			

Oncology, neurology and obesity drive growth through 2027 while diabetes, immunology and COVID-19 contribute to slowing

Historic and forecast net spending growth for leading therapy areas



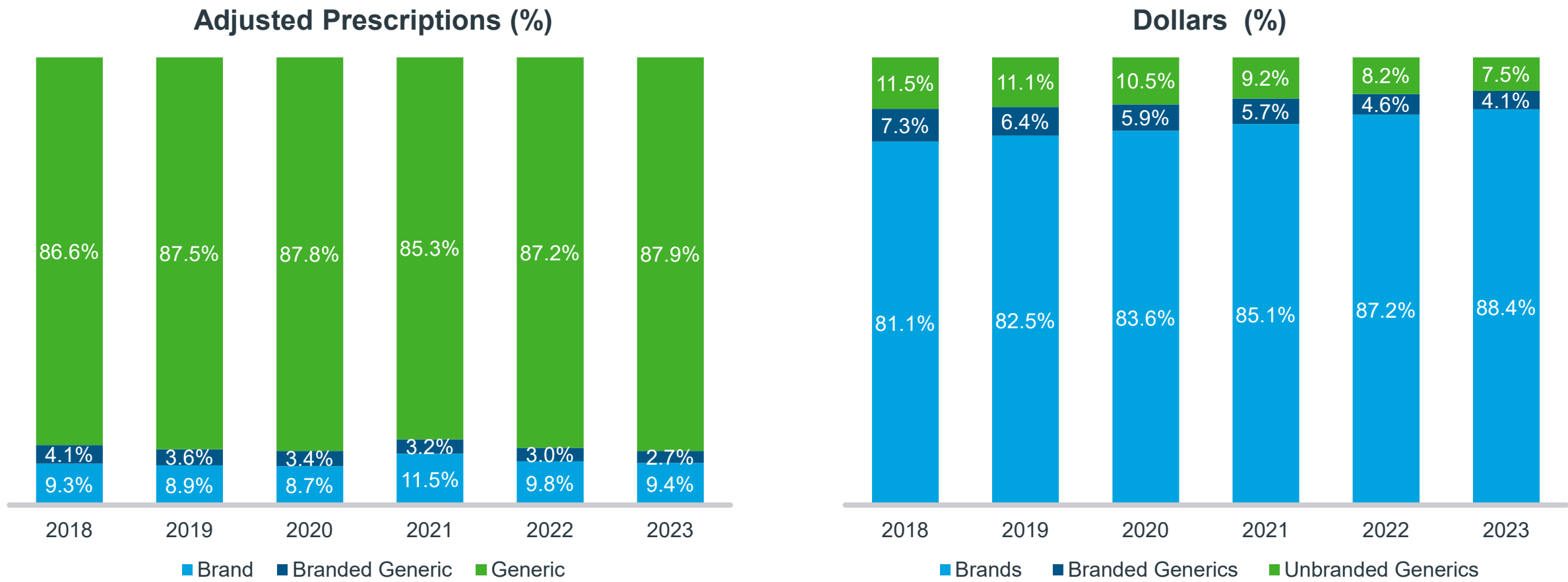
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Generics



87.9% of prescriptions in the US are dispensed as generics (Adjusted)

Unbranded Generics account for 7.5% of spending

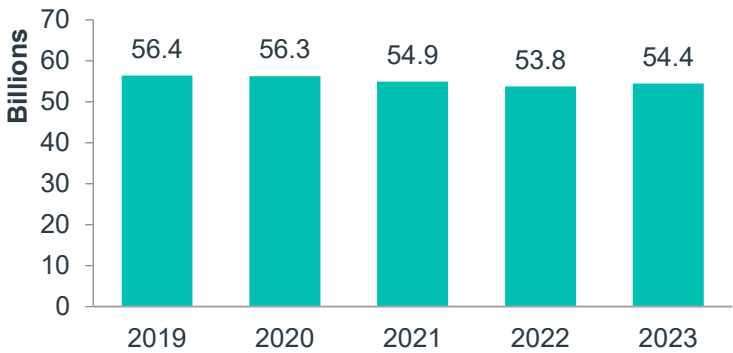


Source: IQVIA, National Sales Perspectives, National Prescription Audit, December 2023
Note: Numbers may not add exactly to 100% due to rounding

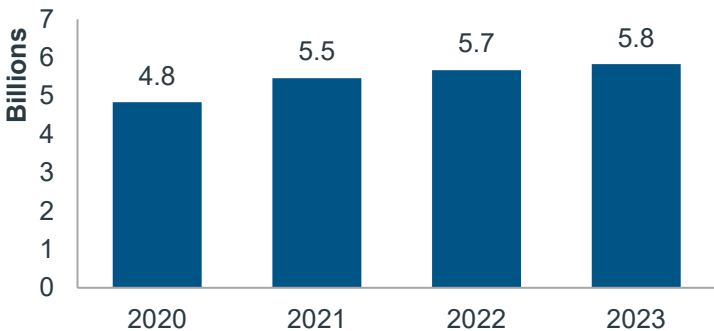
Unbranded Generics sales and Rxs are positive

Unbranded Generics

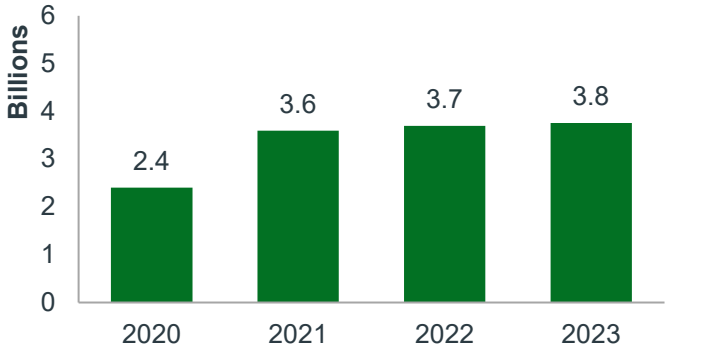
Sales



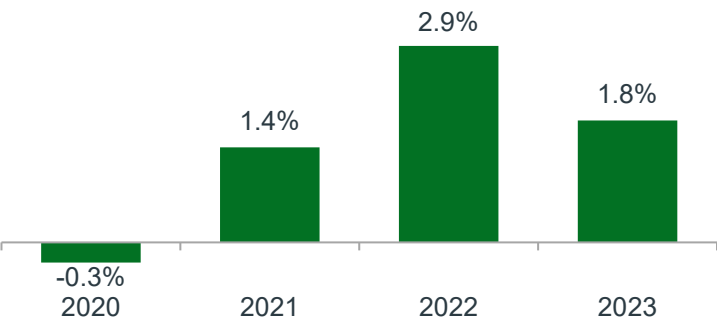
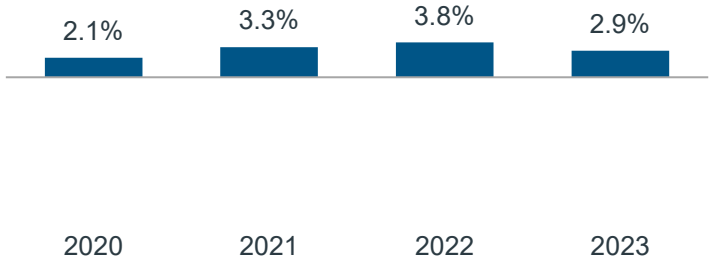
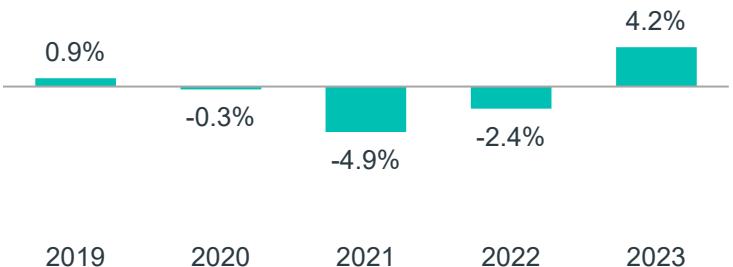
Adjusted Rxs



Unadjusted Rxs



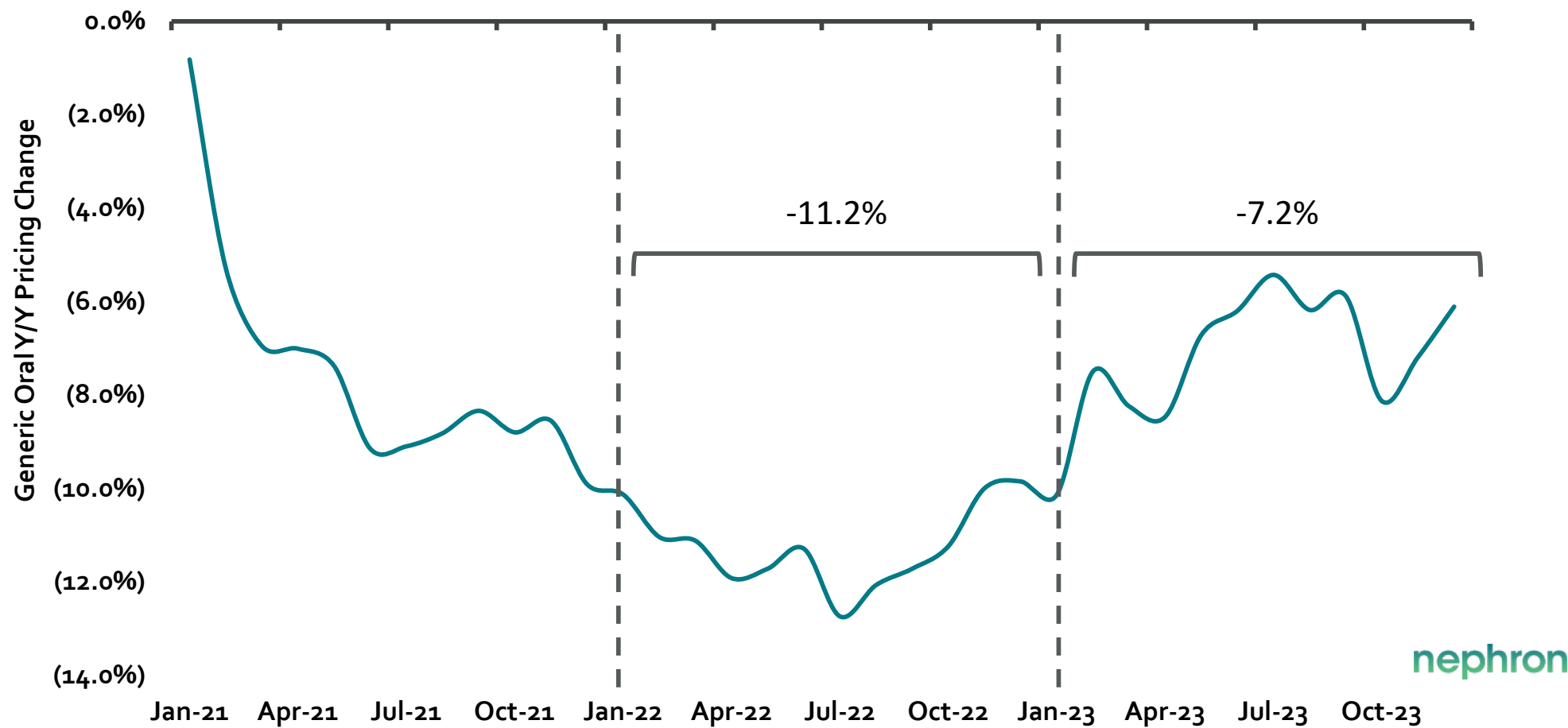
YoY Growth



Source: IQVIA, National Sales Perspectives and RxInsights, 2023
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

Generic price deflation is slowing

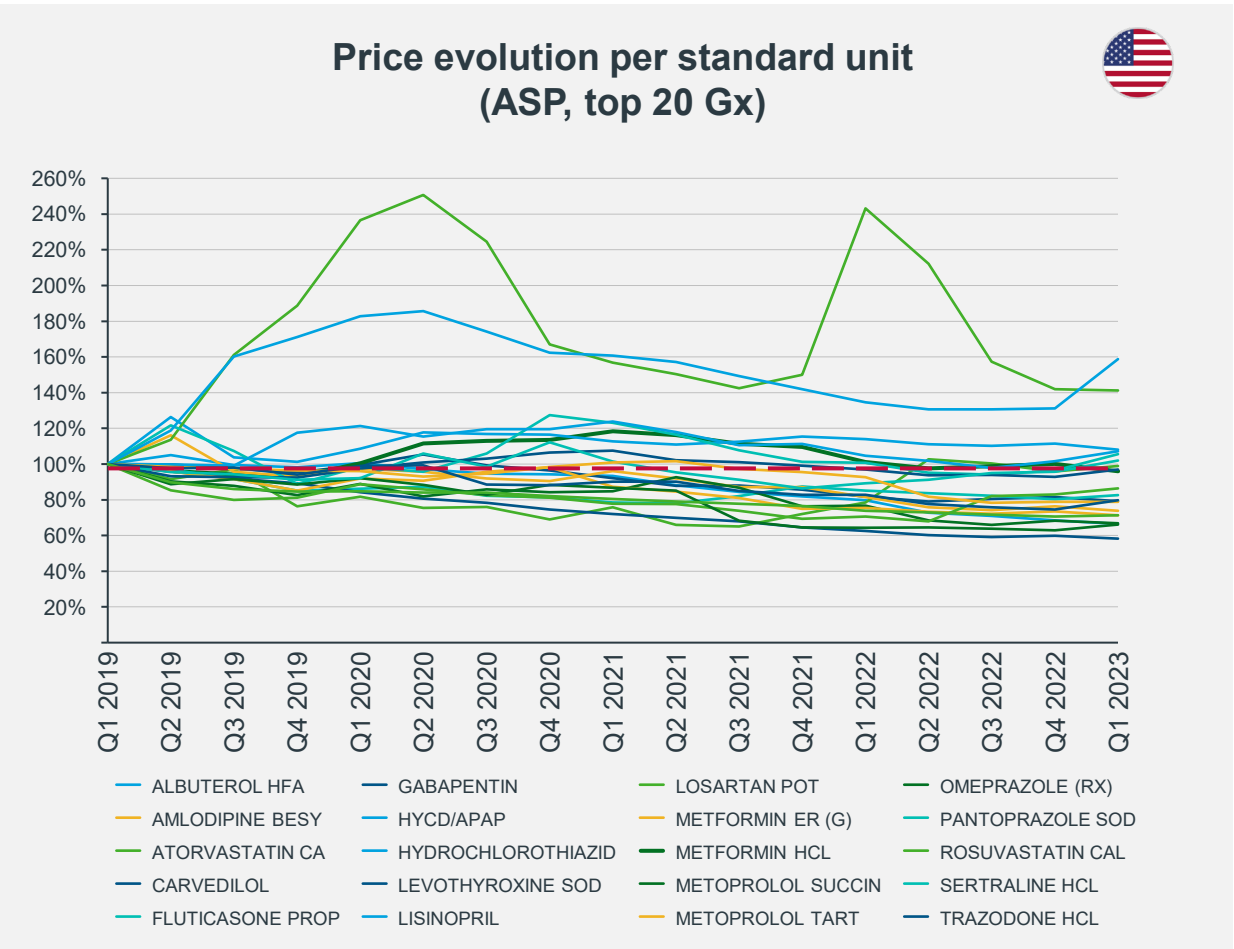
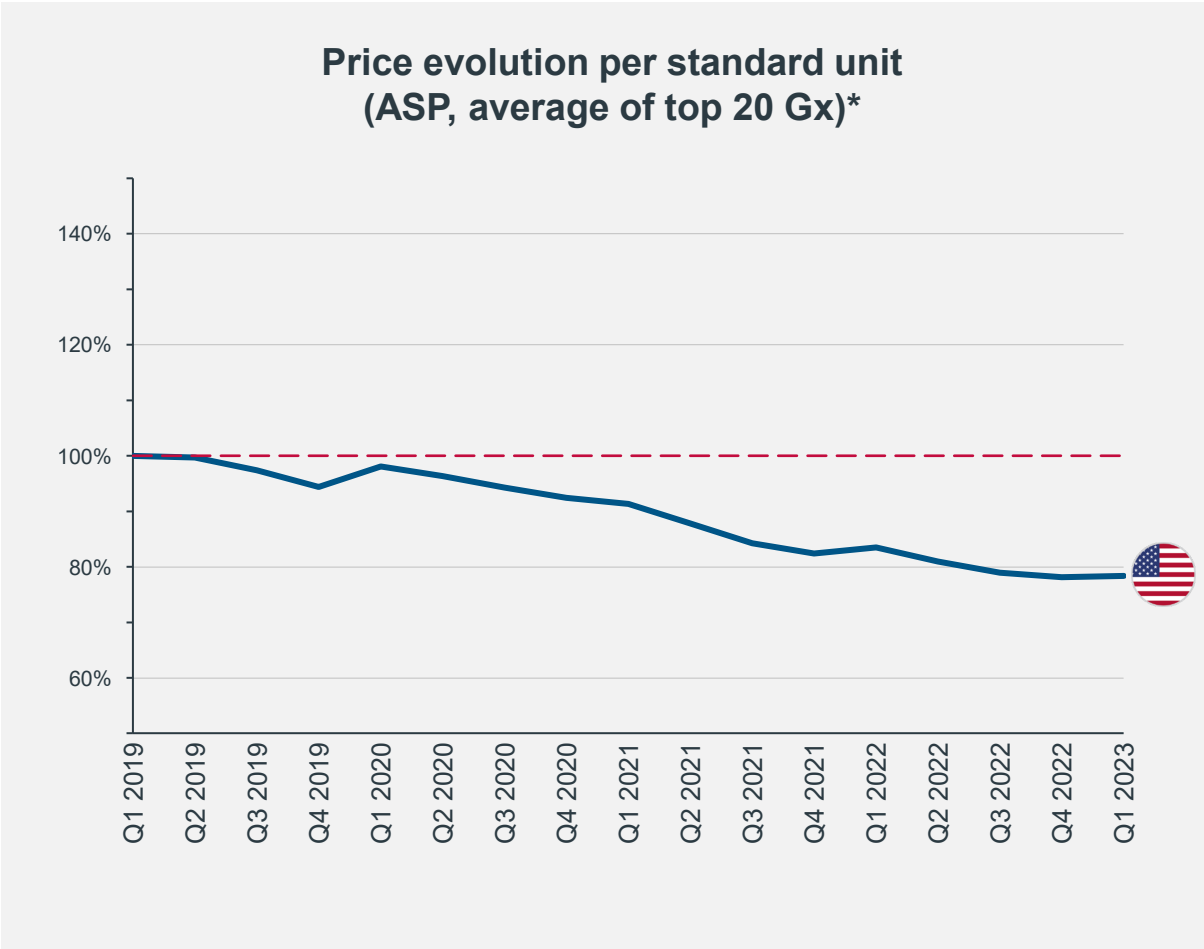
Y/Y Mature Oral Generic Price Trend



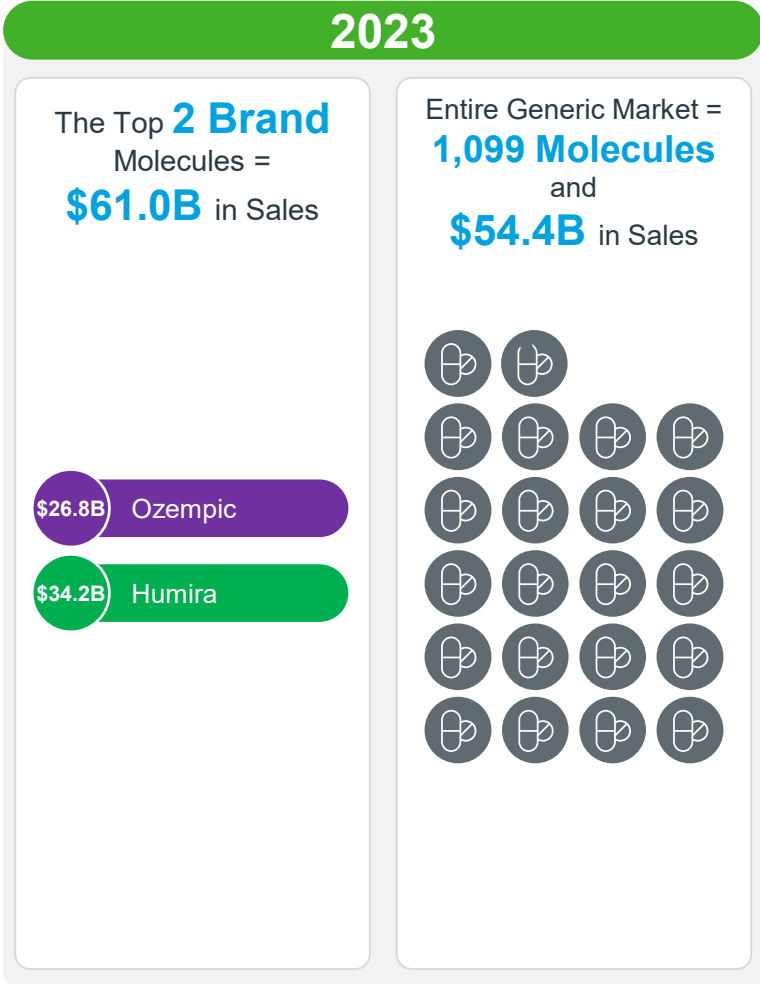
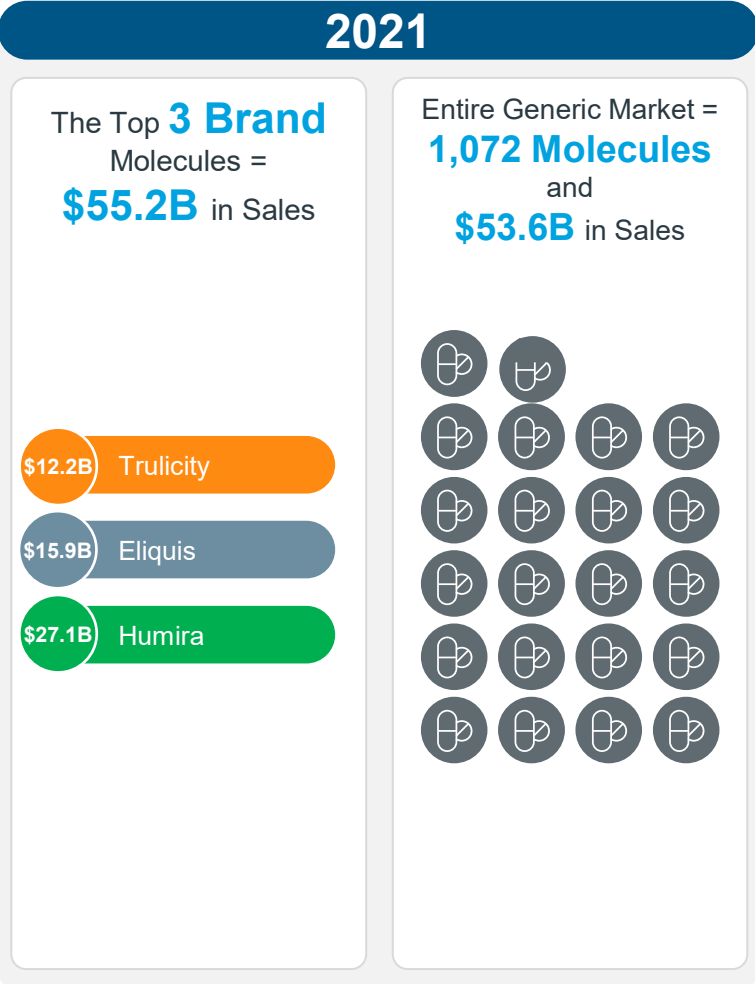
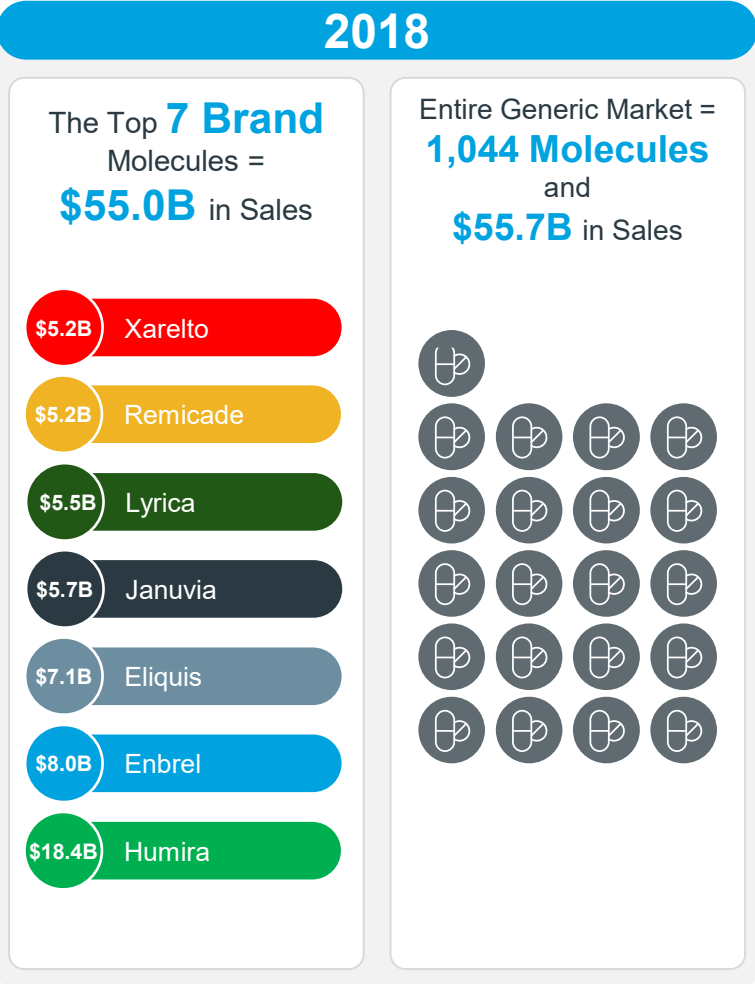
Source: Nephron Research, IQVIA, Glass Box Analytics

In the US, the price of generics has fallen by ~20% since 2019

- Shortages were behind fluctuating prices for losartan and hydrochlorothiazide



In 2018, it took seven Brand drugs to equal the total Generic business; in 2023 it only takes two

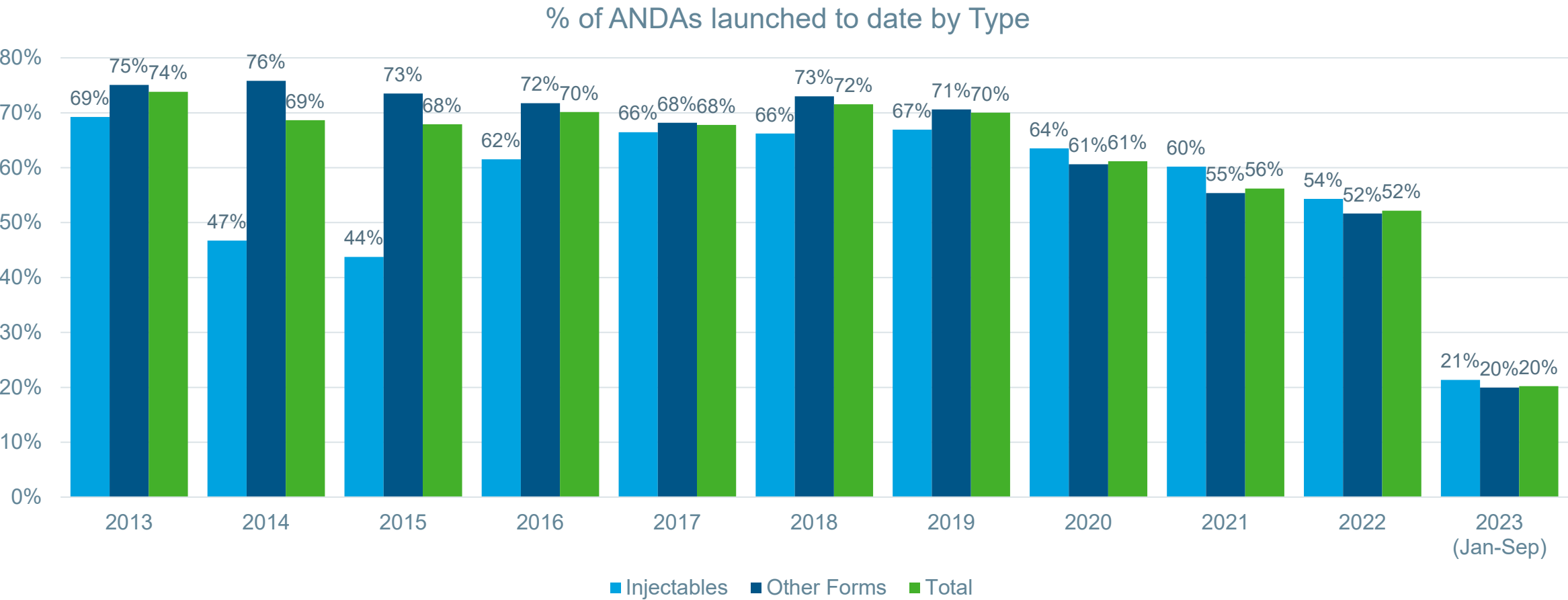


 = 50 Generic Molecules

Data based on the Moving Annual Total month of December

Unlaunched ANDAs account for 39% of approvals since 2013, 42% of injectables and 33% of other forms

A rise in trend of the percentage of approved injectable ANDAs launched since 2020



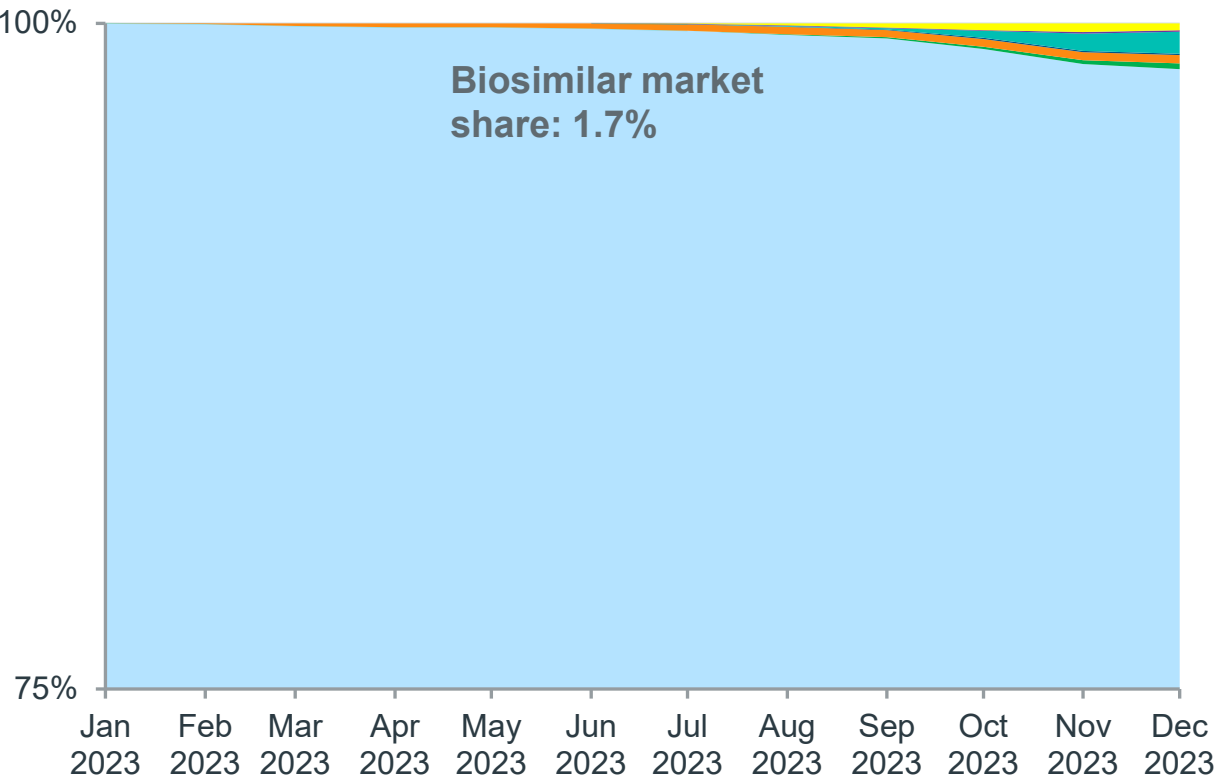
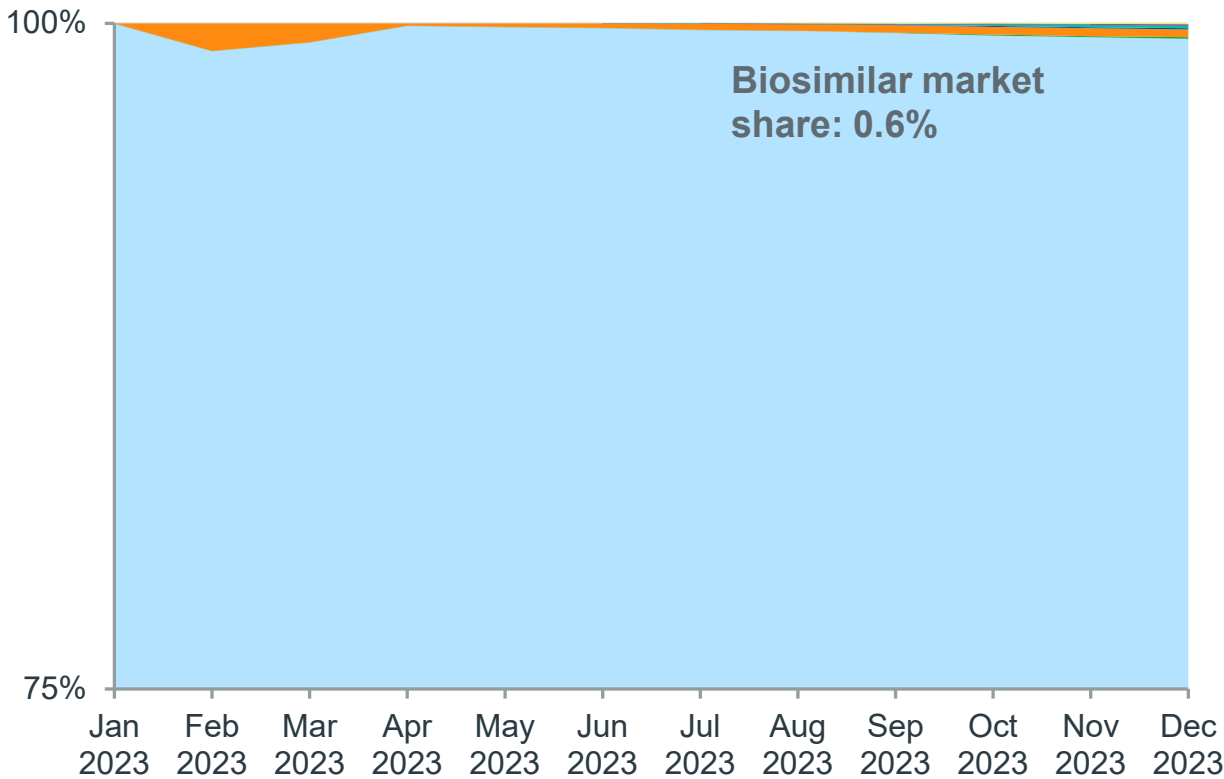
Biosimilar sales are just beginning for Adalimumab (Humira)

US Biosimilar Market Share,
Adalimumab (Humira)

■ Originator

% of Sales, Dec 2023

% of Adjusted Rx's, Dec 2023

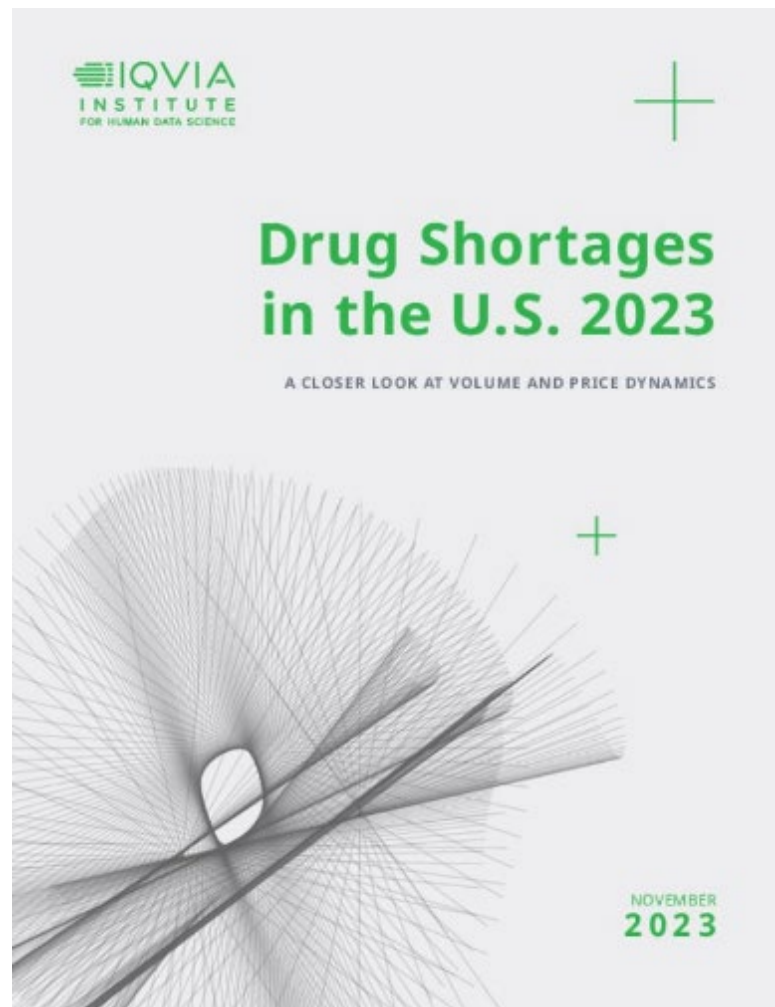


■ HUMIRA ■ ABRILADA ■ ADALIMUMAB ■ AMJEVITA ■ CYLTEZO ■ HADLIMA ■ HULIO ■ HYRIMOZ ■ IDACIO ■ YUFLYMA ■ YUSIMRY

Drug Shortages in the U.S.



The IQVIA Institute released “Drug Shortages in the U.S. 2023”

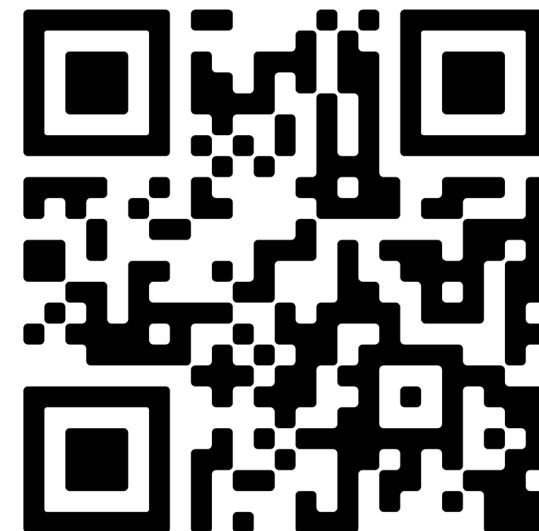


Report Summary

Drug shortages have recently received widespread news coverage for their impact on patient care and public health. The number of drug shortages in the U.S. is increasing as more shortages continue to be reported than resolved. Stakeholders have recommended various approaches to mitigate shortages, such as prioritizing essential medicines, stockpiling, and making changes to reimbursement or statutory rebates. Shortages appear to be driven by a variety of causes that need to be better understood, as they may impact which solutions will best address them.

In this report, shortages reported by the Food and Drug Administration are assessed in conjunction with sales and volume data of these medicines in the U.S. market. Characteristics of shortages, including product type, form, and the number of manufacturers are evaluated.

Market concentration is assessed for molecules with shortages based on current sales data. The causes and impacts of shortages across a range of therapy areas are analyzed and presented here.



Not all drug shortages are created equal

Drug shortages are large and increasing; fewer are being resolved

Some of the impact of **injectable shortages** is **driven by demand**, where some purchasers have **increased orders to buffer the expected disruptions**.

Not all purchasers are able to pursue these approaches and shortages have impacted some differently than others.

There are **more shortages in generics and injectables; Orals and brand** shortages are due to demand.

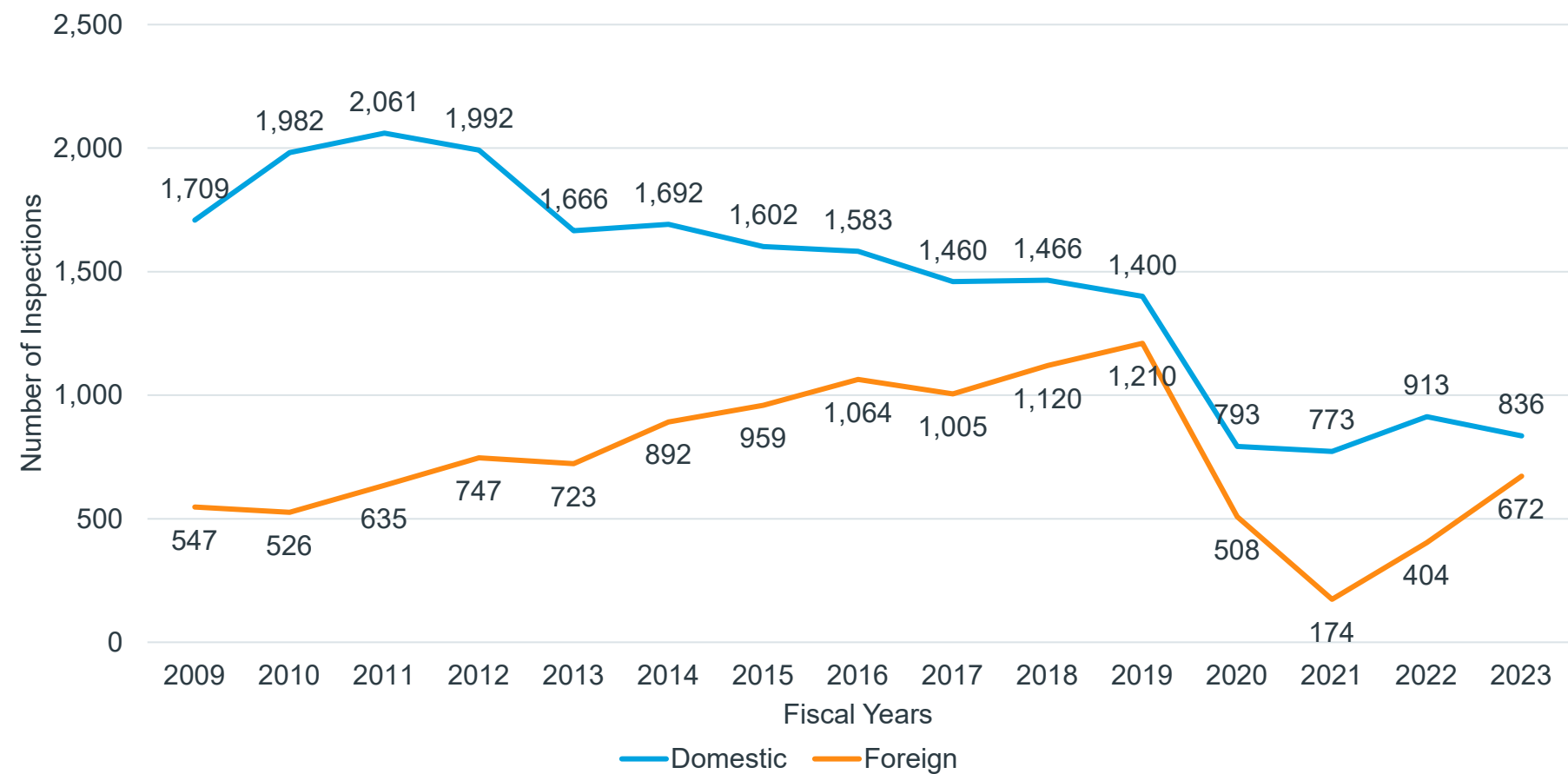
Key drugs in shortage include cancer medications **cisplatin** and **carboplatin**; a form of the antibiotic **amoxicillin**; **Ozempic**, **Mounjaro** and **Trulicity**; as well as **Adderall**.

Supply issues within the **sterile injectables** include the impacts of dynamic market shifts between manufacturers from **production disruption** (e.g., due to inspection, shortage of active ingredient, natural disasters) which have impacted oncology and antibacterials.

Sources: Michael Kleinrock, IQVIA Institute, [Drug shortages shine spotlight on FDA powers | The Hill](#)

FDA's inspections of pharmaceutical manufacturing facilities have yet to return to pre-COVID levels

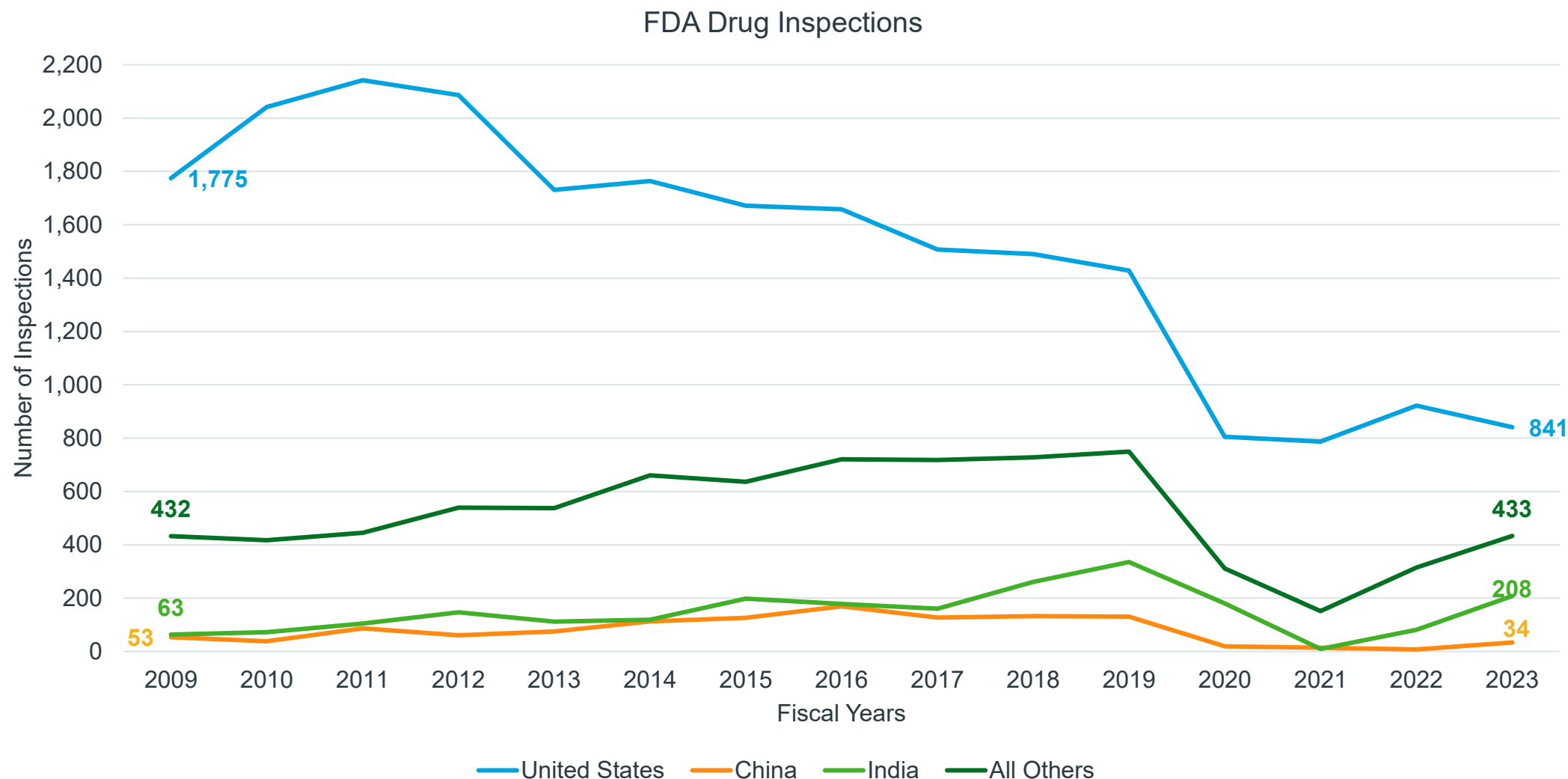
FDA Drug Inspections



- Important Notes:
 - Not all inspections are included in the database. Inspections conducted by States, pre-approval inspections, mammography facility inspections, inspections waiting for a final enforcement action, and inspections of nonclinical labs are not included.
 - The results show final classifications of No Action Indicated (NAI), Voluntary Action Indicated (VAI), Official Action Indicated (OAI) for each project area within an inspection.

The U.S. Government's Fiscal Year runs October 1 through September 30
Data Source: <https://datadashboard.fda.gov/ora/cd/inspections.htm> , data pulled 1/29/2024

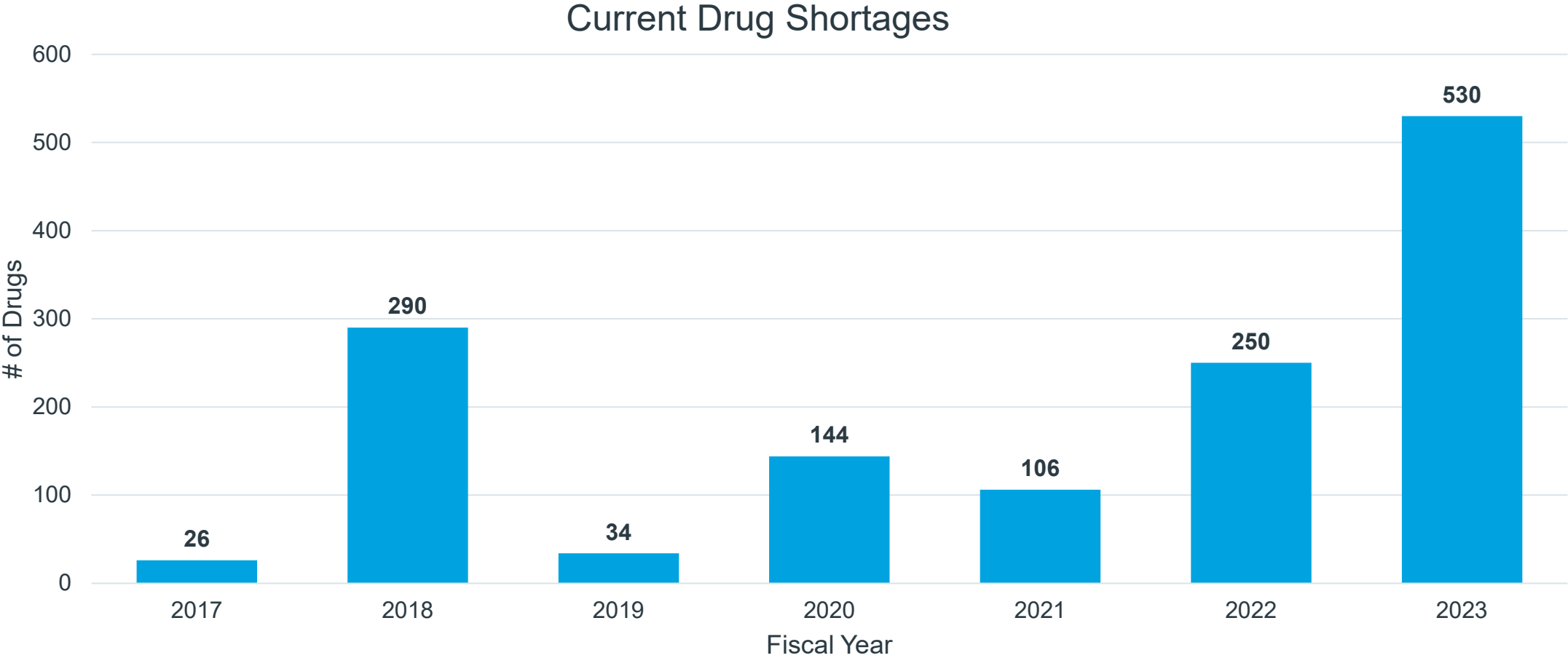
Inspections of pharmaceutical manufacturing facilities have increased in India and other foreign countries the last two years



- Important Notes:
 - Not all inspections are included in the database. Inspections conducted by States, pre-approval inspections, mammography facility inspections, inspections waiting for a final enforcement action, and inspections of nonclinical labs are not included.
 - The results show final classifications of No Action Indicated (NAI), Voluntary Action Indicated (VAI), Official Action Indicated (OAI) for each project area within an inspection.

The U.S. Government's Fiscal Year runs October 1 through September 30
Data Source: <https://datadashboard.fda.gov/ora/cd/inspections.htm> , data pulled 1/29/2024

The number of drugs listed in the FDA Drug Shortages data set continues to remain high



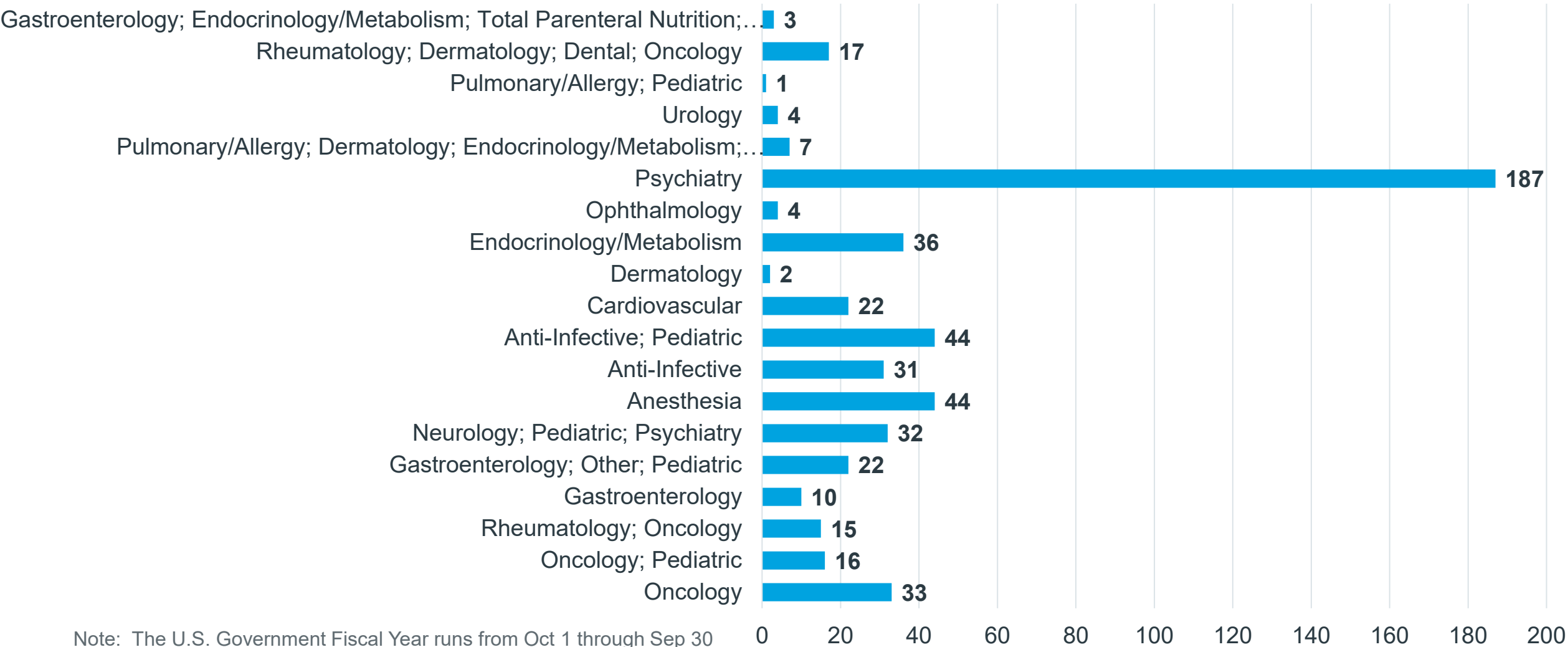
Note: The U.S. Government Fiscal Year runs from Oct 1 through Sep 30 (This slide depicts only three months of the fiscal year for 2024)

Data Source: <https://www.accessdata.fda.gov/scripts/drugshortages/default.cfm>, data pulled 1/29/2024

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Psychiatry drugs have the greatest number of shortages according to the FDA

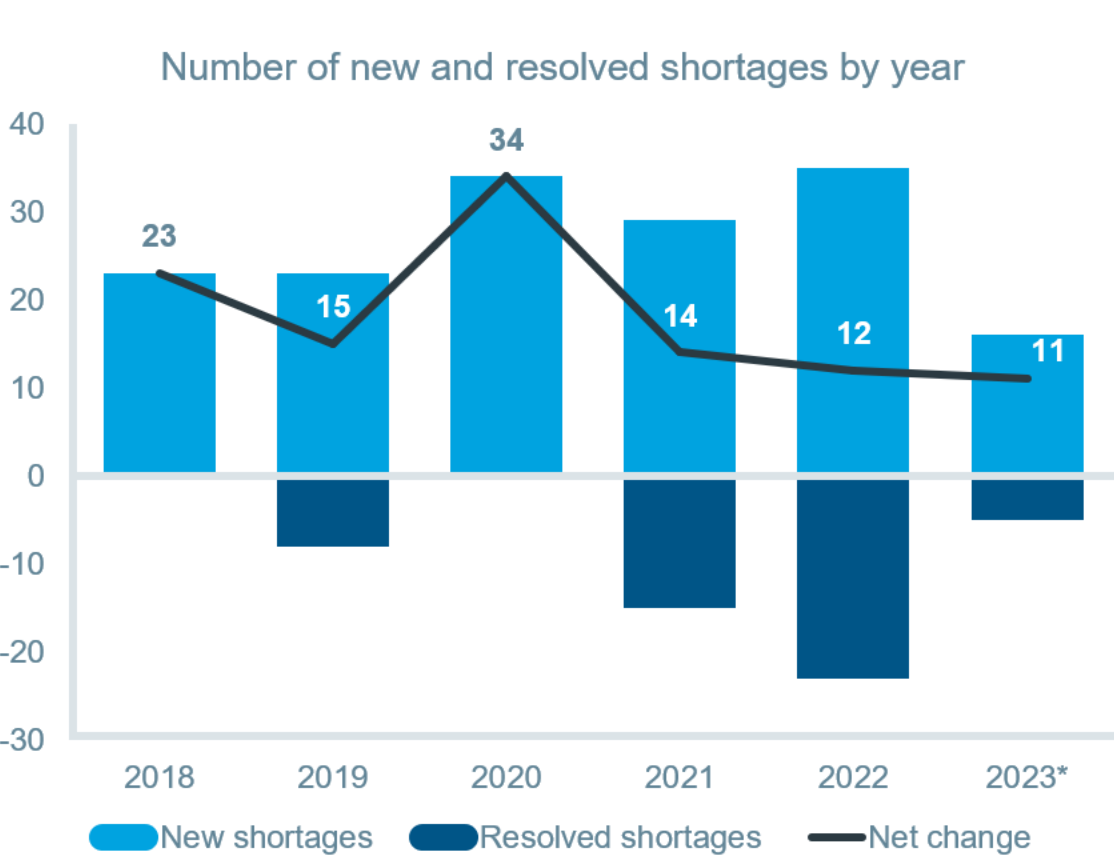
Drug Shortages by Therapy Area Fiscal Year 2023



Note: The U.S. Government Fiscal Year runs from Oct 1 through Sep 30
Data Source: <https://www.accessdata.fda.gov/scripts/drugshortages/default.cfm>, data pulled 1/29/2024

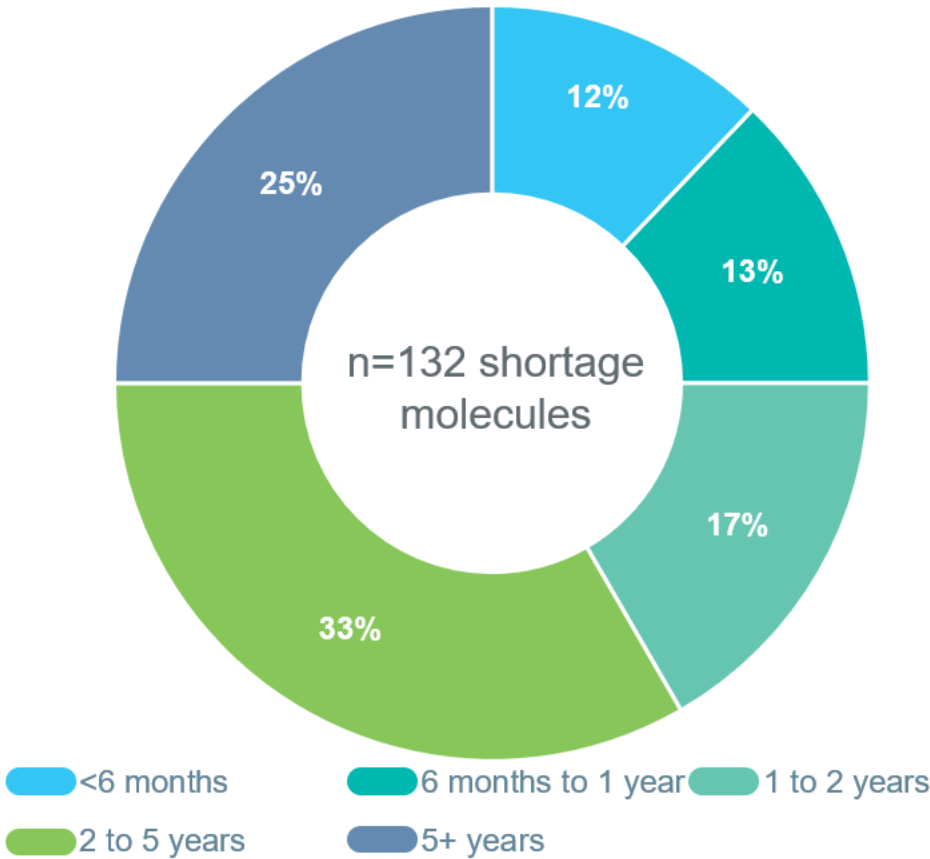
More shortages continue to be reported than resolved with 58% of current shortages ongoing for more than two years

Net shortage increase by year and time since first posting of current shortages



*2023 is through June

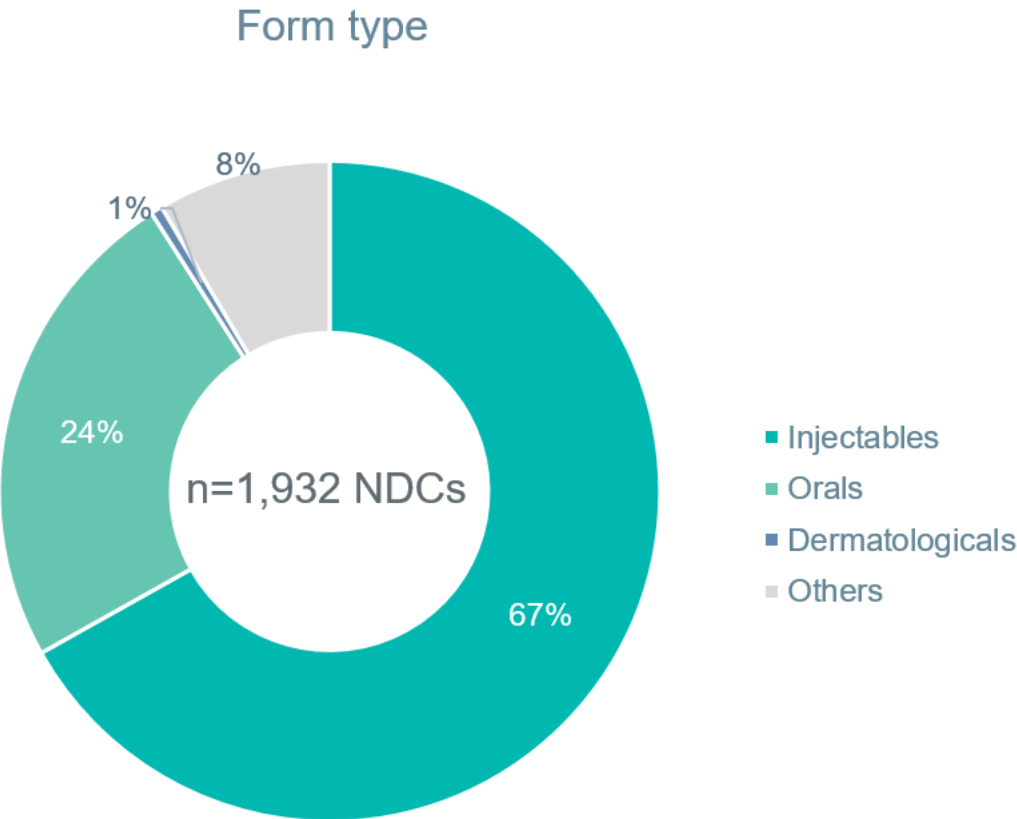
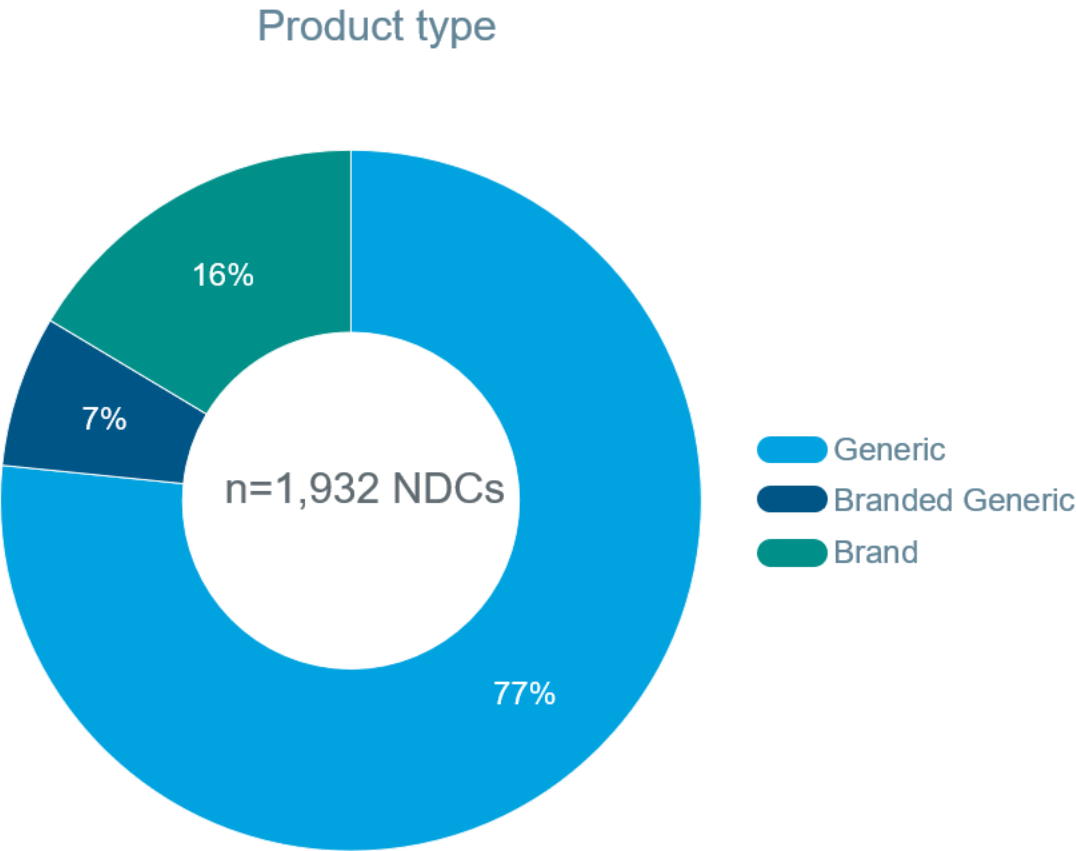
Current shortages as of Jun 2023 by time since first posting



Source: FDA Drug Shortages Database, IQVIA National Sales Perspective, Jun 2023; IQVIA Institute, Oct 2023.

84% of the drugs in shortage in the last six years are generics, 67% injectables, and 24% orals

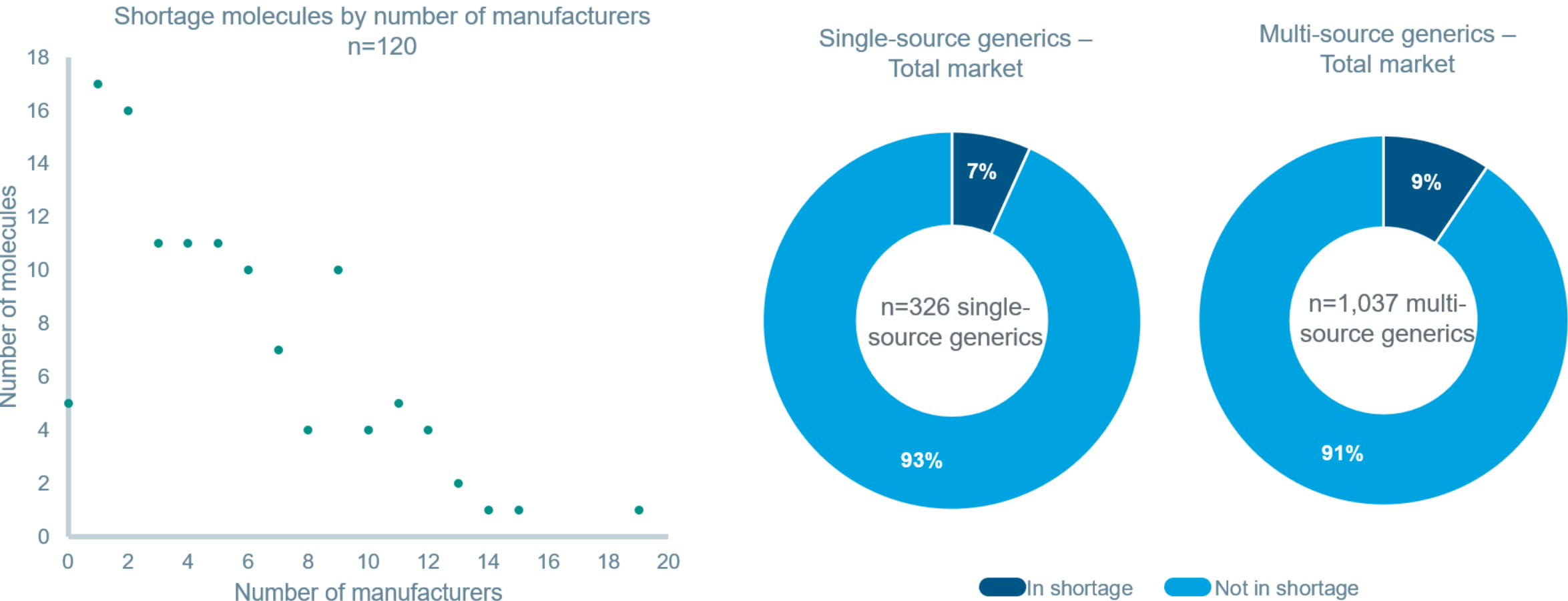
FDA shortages by product type and form, 2017–Jun 2023



Source: FDA Drug Shortages Database, IQVIA National Sales Perspective, Jun 2023; IQVIA Institute, Oct 2023.

Multi-source generic molecules are more likely to be in shortage than single-source molecules

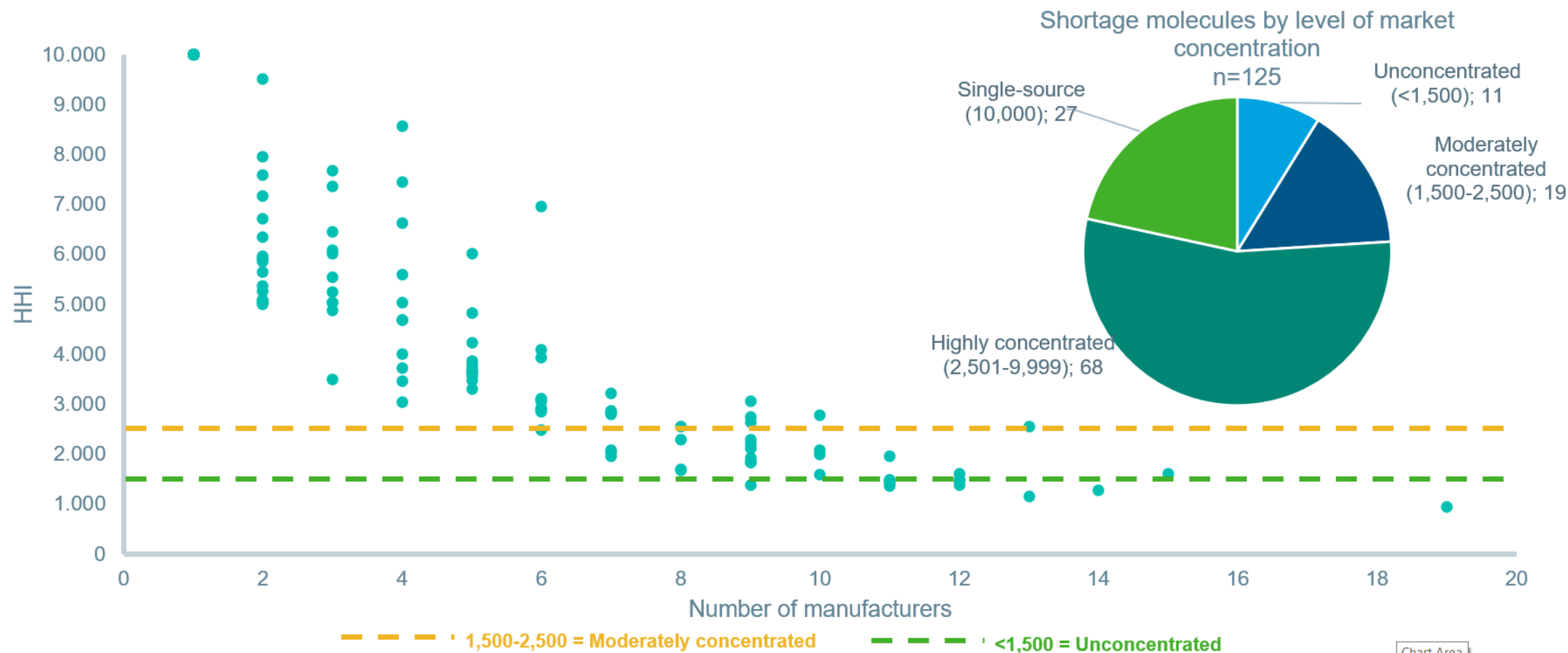
Generic molecules by shortage status and number of manufacturers, Jan–Jun 2023



Source: FDA Drug Shortages Database, IQVIA National Sales Perspective, Jun 2023; IQVIA Institute, Oct 2023.

Most molecules with shortages are multi-source but remain highly concentrated, impacting resilience to shortages

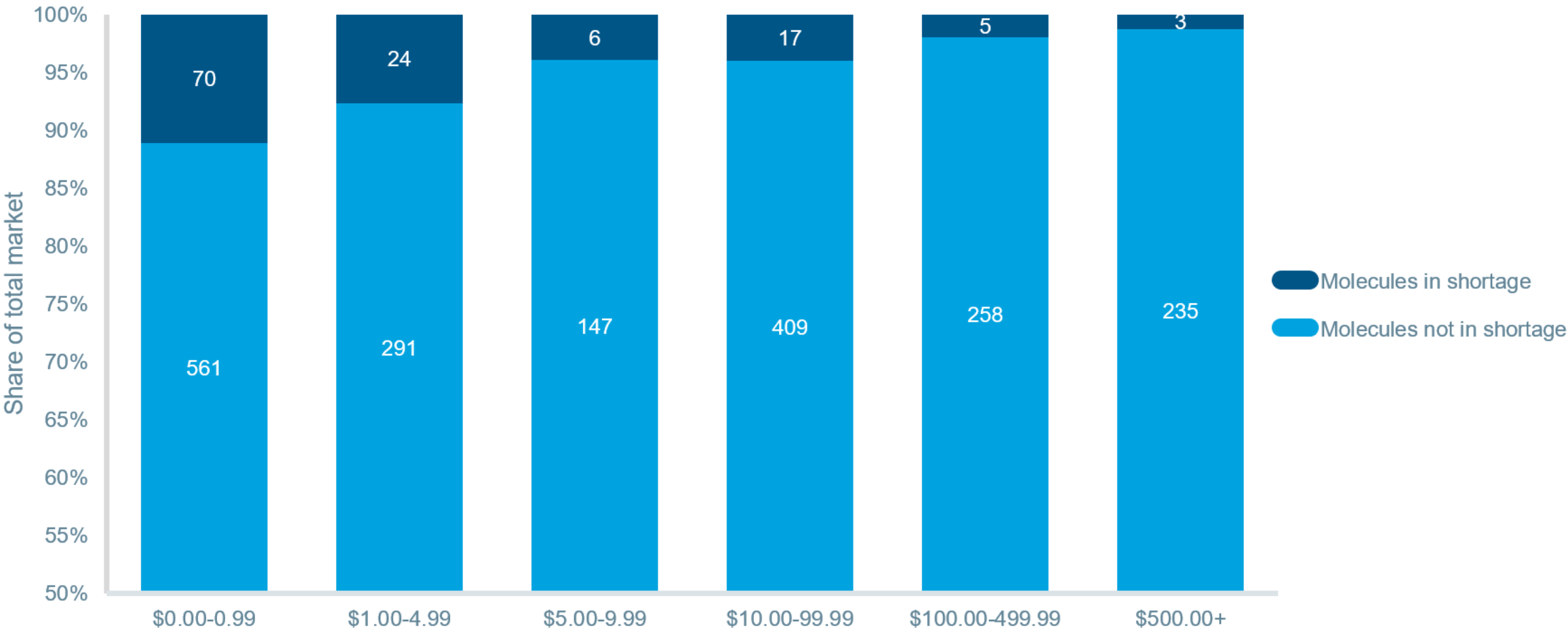
Shortage molecule Herfindahl-Hirschman Index (HHI) and number of companies, Jan–Jun 2023



Source: FDA Drug Shortages Database, Jun 2023; IQVIA National Sales Perspective, Jul 2023; IQVIA Institute, Jul 2023.

Shortages are more common at lower prices with 56% of molecules in shortage priced less than \$1.00 per unit

Average invoice price per extended unit of molecules, Jan–Jun 2023, n=2,026

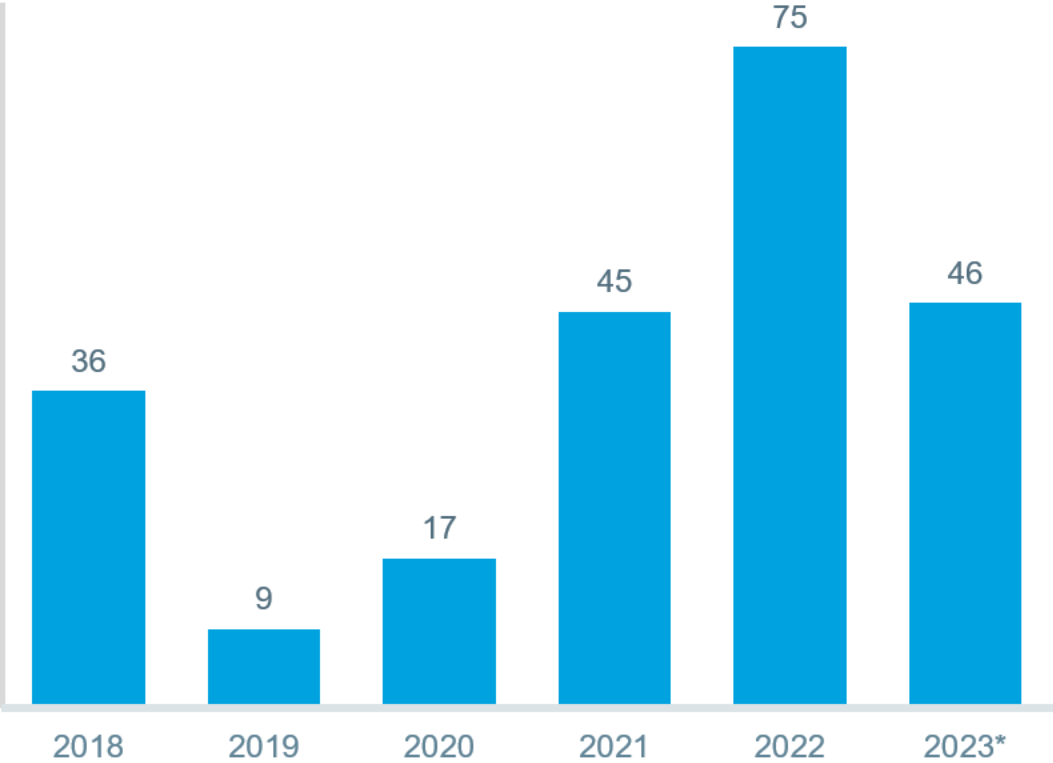


Source: FDA Drug Shortages Database, Jun 2023; IQVIA National Sales Perspective, Jul 2023; IQVIA Institute, Jul 2023.

Planned pack discontinuations rarely lead to shortages, but market exit can disrupt other participants and affect resilience

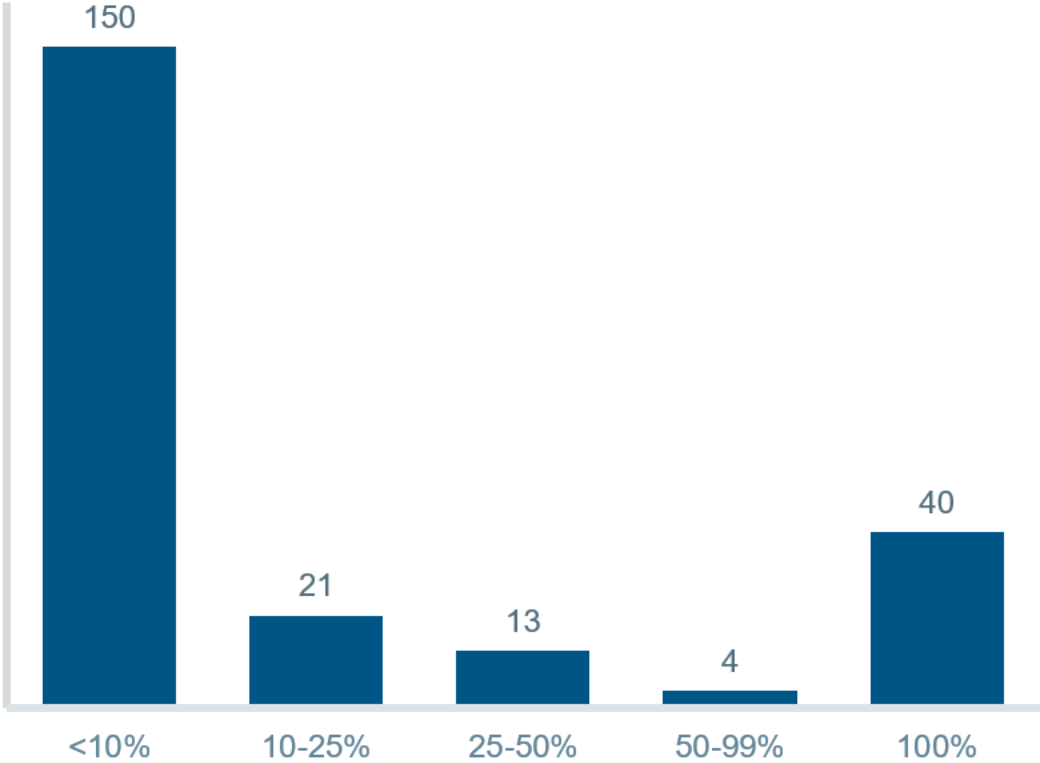
Planned discontinuations by first posting date and volume share prior to posting

Molecules with discontinuations by first posting date



*2023 is through June

Planned discontinuations share of molecule volume one month prior to posting



New Product Launch Update




Executive Summary

There were 80 launches in 2023, compared to 58 launches in 2022 and 76 launches in 2021
Immunology is the top therapy area in 2023, accounting for 31% of new product launches

80

Launches in 2023





Top therapy areas of 2023 launches


Immunology

Oncology

Anti-infectives



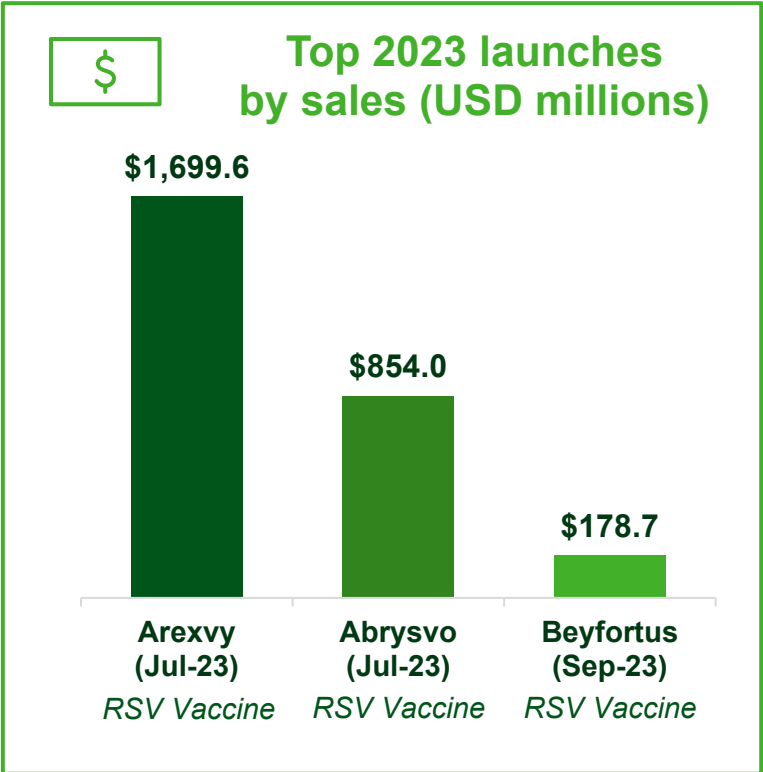





31%

11%

11%



54

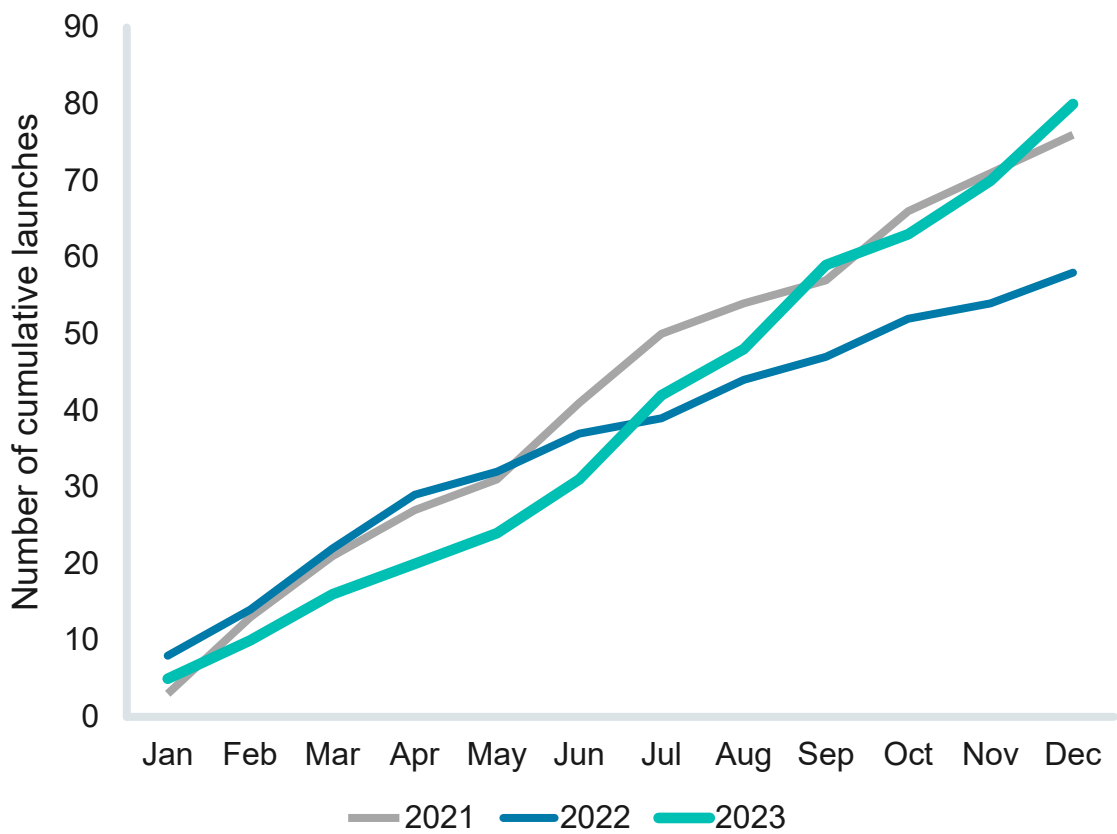


Of the 54 FDA approved New Molecular Entities (NMEs) in 2023, 54 show evidence of launch based on supply in channel or active websites

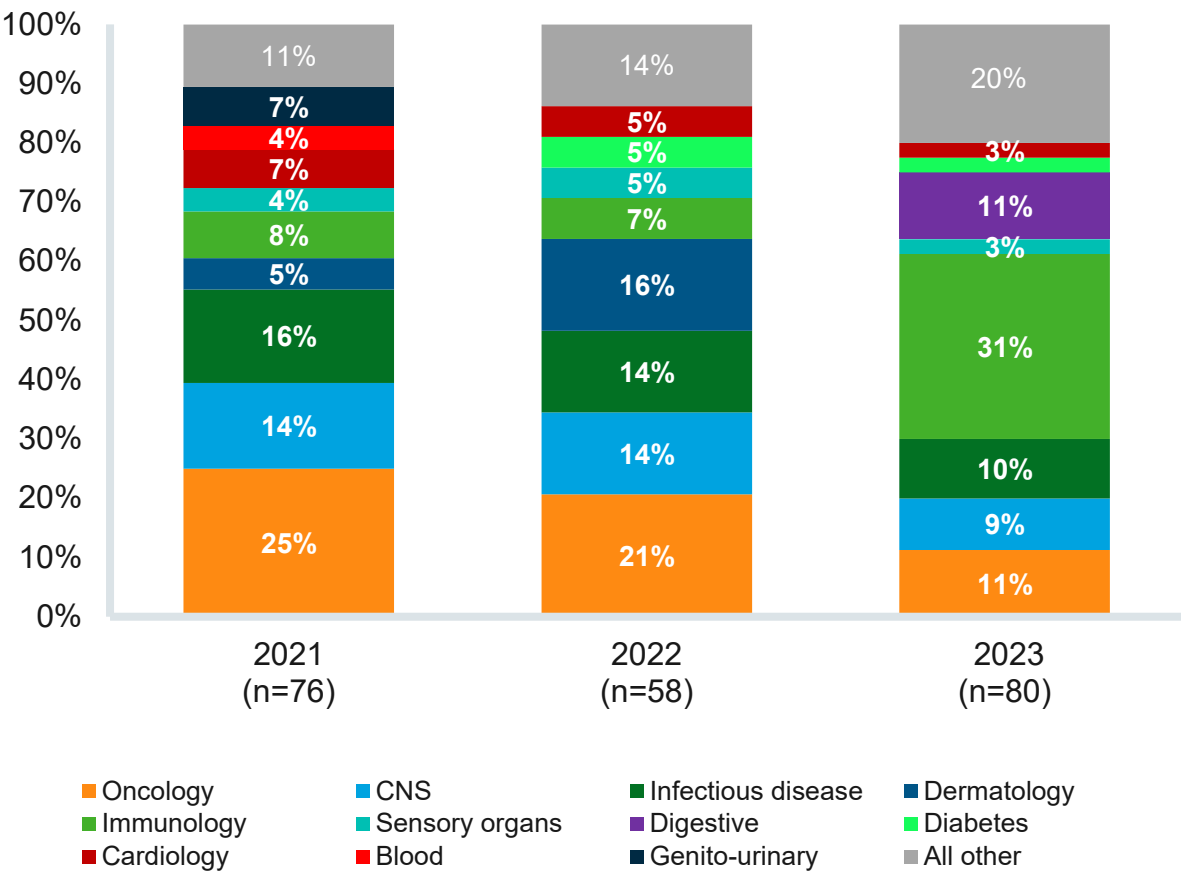
In 2022, the FDA approved 36 New Molecular Entities (NMEs). Of those 33 showed evidence of launch

2023 closed with 80 total launches, surpassing 2022 and 2021. This is largely attributed to a Q3 influx of Humira biosimilars and RSV vaccines

Time-aligned cumulative launches 2021–2023



Launches by therapy area 2021–2023

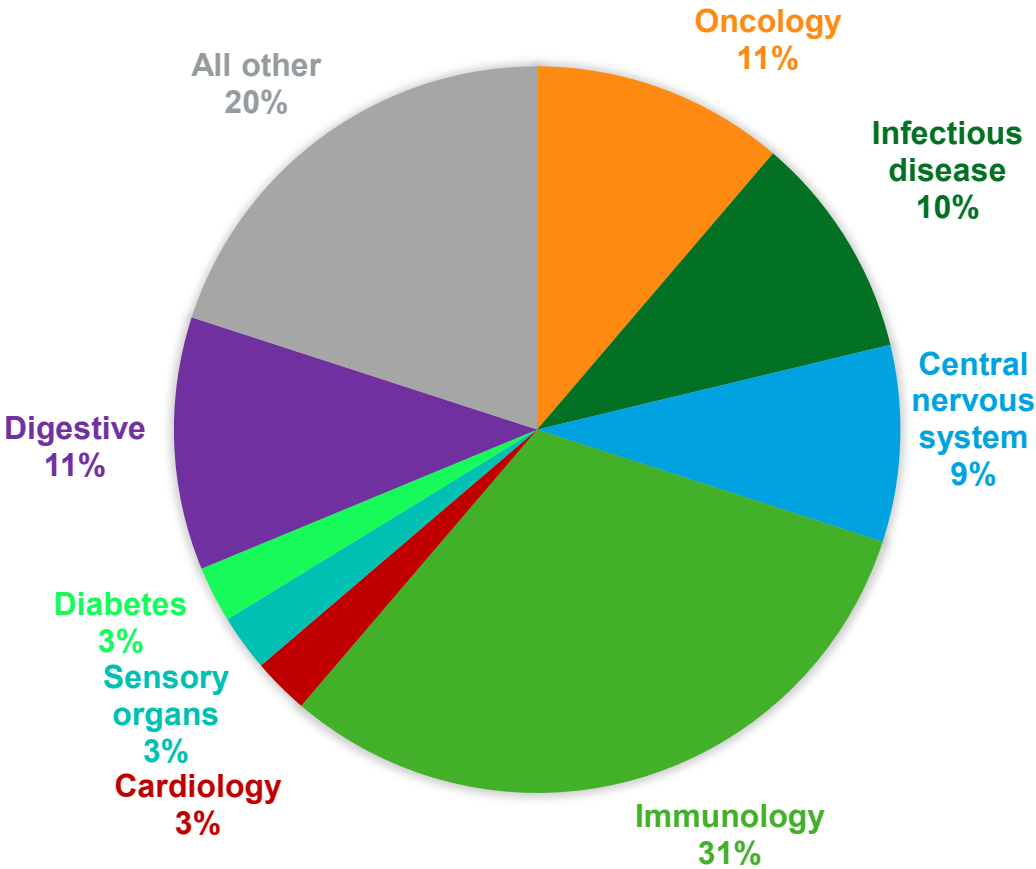


Source: National Sales Perspective; Center of Launch Excellence, IQVIA; publicly available information from the FDA
Notes: CNS = Central nervous system

2023 sales have been dominated by the GSK and Pfizer RSV vaccines

Lilly's Zepbound (tirzepatide) for obesity has established a presence amongst the top performers within one month

2023 – 80 Launches



2023 – Top 10 Performers

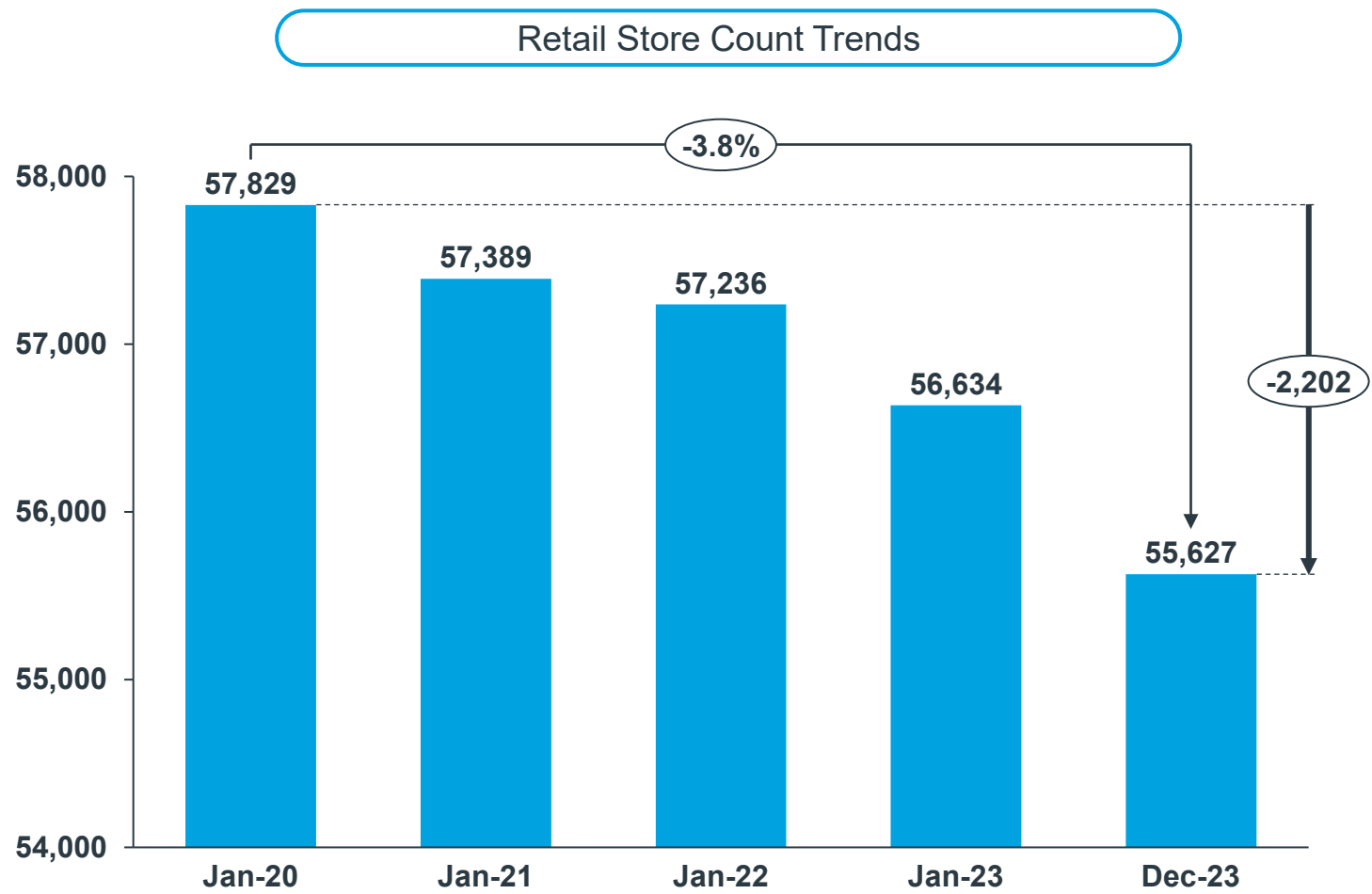
Product	Company	Indication	Launch	First year gross sales (as of Dec-23)	Yr 1 NBRx through 1/5/24
Arexvy RSV vaccine	GSK	Prevention of LRTD caused by RSV (60+)	Jul-23	\$1.7B	6.1M
Abrysvo RSV vaccine	Pfizer	RSV vaccine (0-6m, gest age 32-36wks, 60+)	Jul-23	\$853.9M	2.9M
Beyfortus nirsevimab-alip	Sanofi	RSV vaccine Pediatrics 0-24m	Sep-23	\$178.6M	N/A
Altuviiio Antihemophilic factor recombinant	Sanofi	Hemophilia A	Apr-23	\$145.3M	N/A
Orserdu elacestrant	Stemline	Breast cancer	Feb-23	\$140.7M	N/A
Elahere mirvetuximab soratansine	Immunogen	Ovarian, fallopian tube and peritoneal cancer	Mar-23	\$127.0M	N/A
Zepbound tirzepatide	Lilly	Obesity	Dec-23	\$120.6M	N/A
Amjevita adalimumab	Amgen	RA, PsA, PsO, CD, UC	Feb-23	\$110.9M	N/A
Miebo perfluorohexyloctane ophthalmic solution	Bausch + Lomb	Dry eye disease	Sep-23	\$78.4M	62.8K
Jaypirca pirtobrutinib	Eli Lilly	Mantle cell lymphoma	Feb-23	\$68.9M	N/A

Source: National Sales Perspective; Center of Launch Excellence, IQVIA
Notes: All sales values are USD. LRTD = Lower Respiratory Tract Disease; RA = rheumatoid arthritis; PsA = psoriatic arthritis; PsO = plaque psoriasis; CD = Crohn's disease; UC = ulcerative colitis
Due to its emergency use authorization, Novavax COVID-19 vaccine was not included in the top 10 performers, although it had sales of \$49M through December 2023
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Retail Class of Trade and Method of Payment Performance



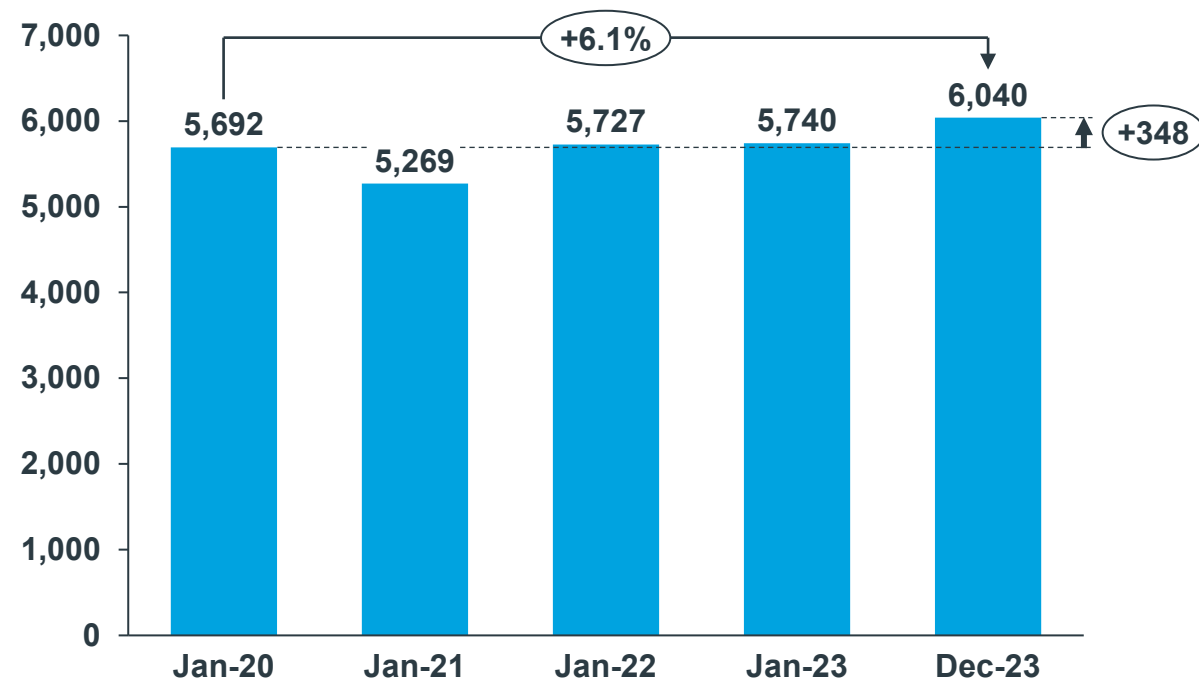
There are over 2,200 fewer retail pharmacies today than four years ago



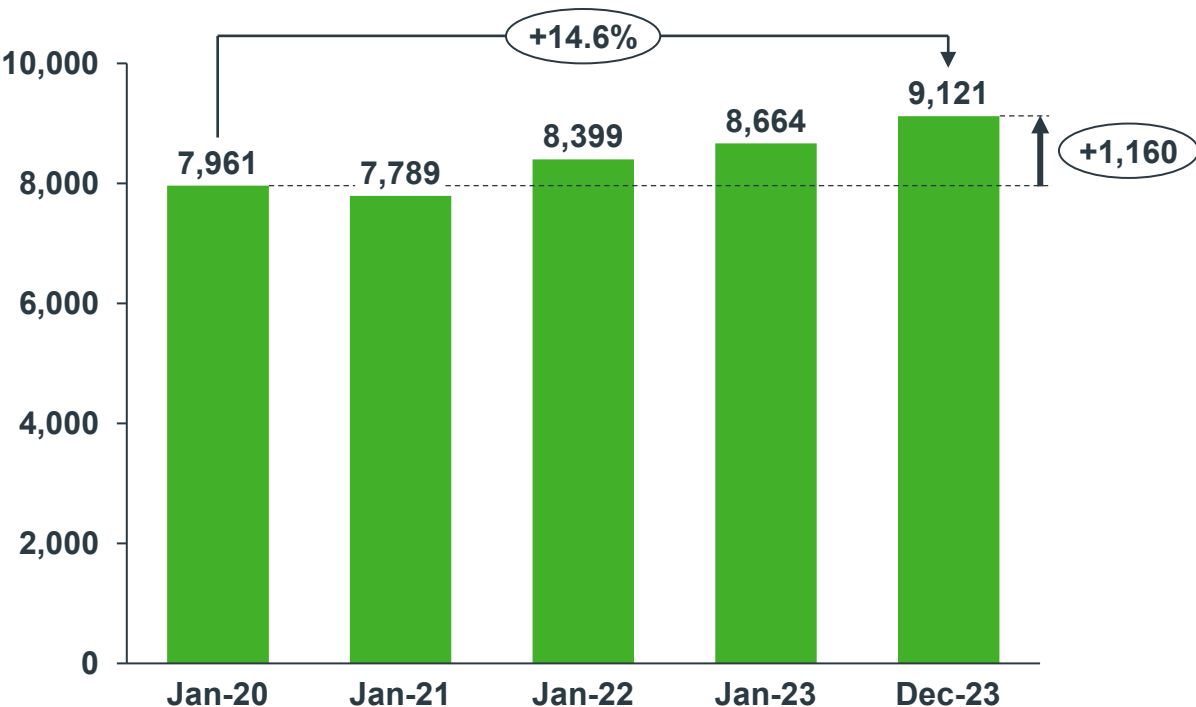
Data Source: The store count data is reflective of the stores in the IQVIA Rx Universe as of December 2023.

Despite store closings, average Rxs per store continue to rise

Avg. Unadj. Rxs per Store per Month

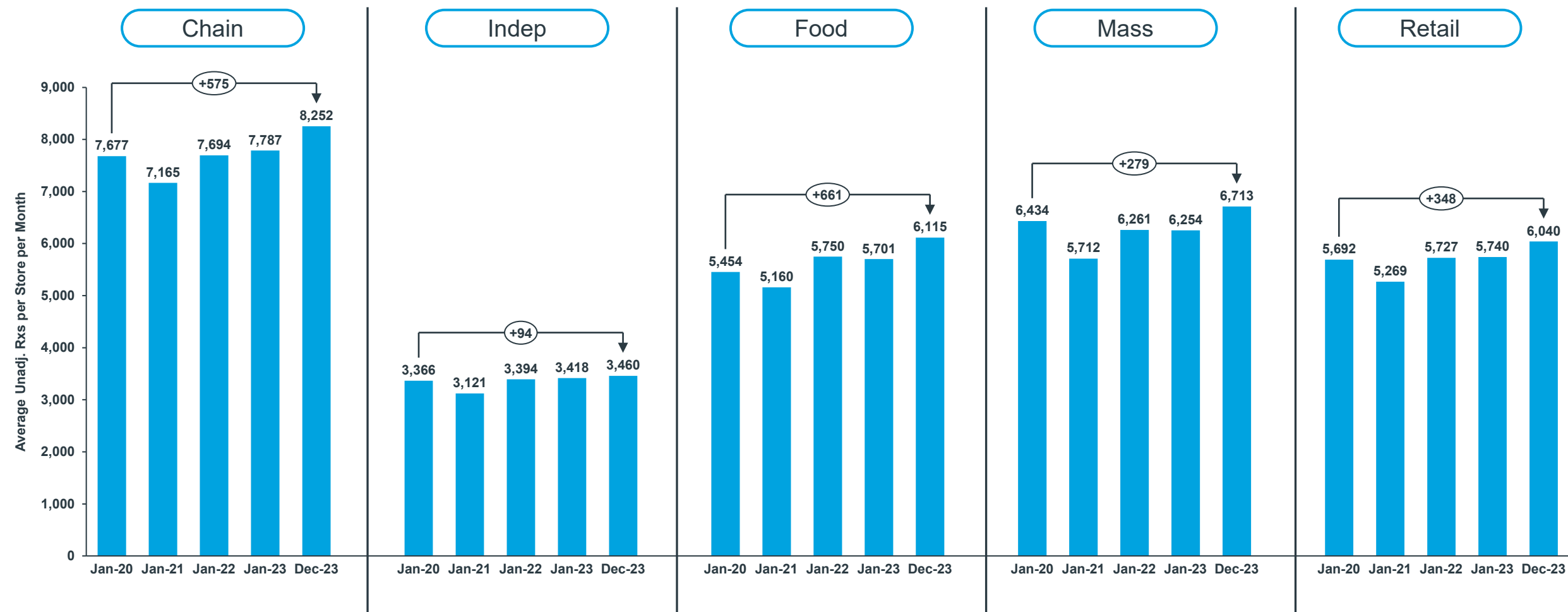


Avg. Adj. Rxs per Store per Month



Data Source: The store count data is reflective of the stores in the IQVIA Rx Universe as of December 2023.

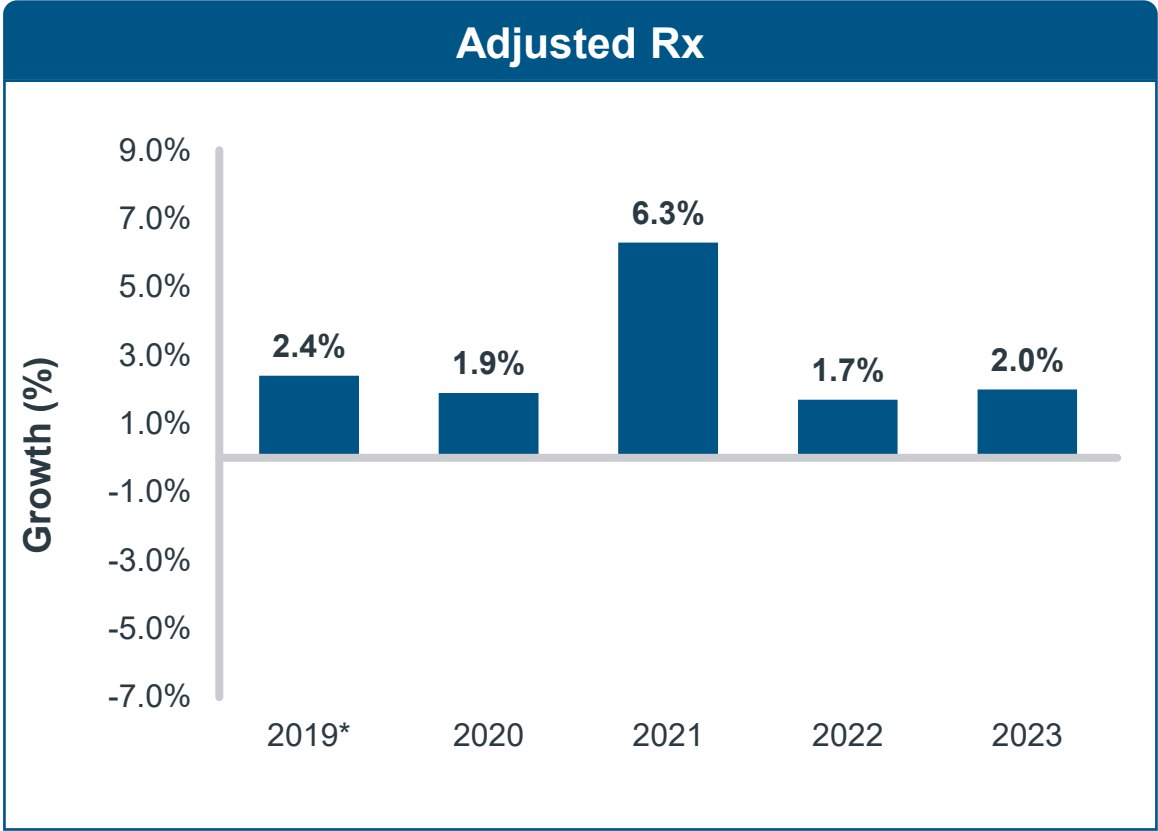
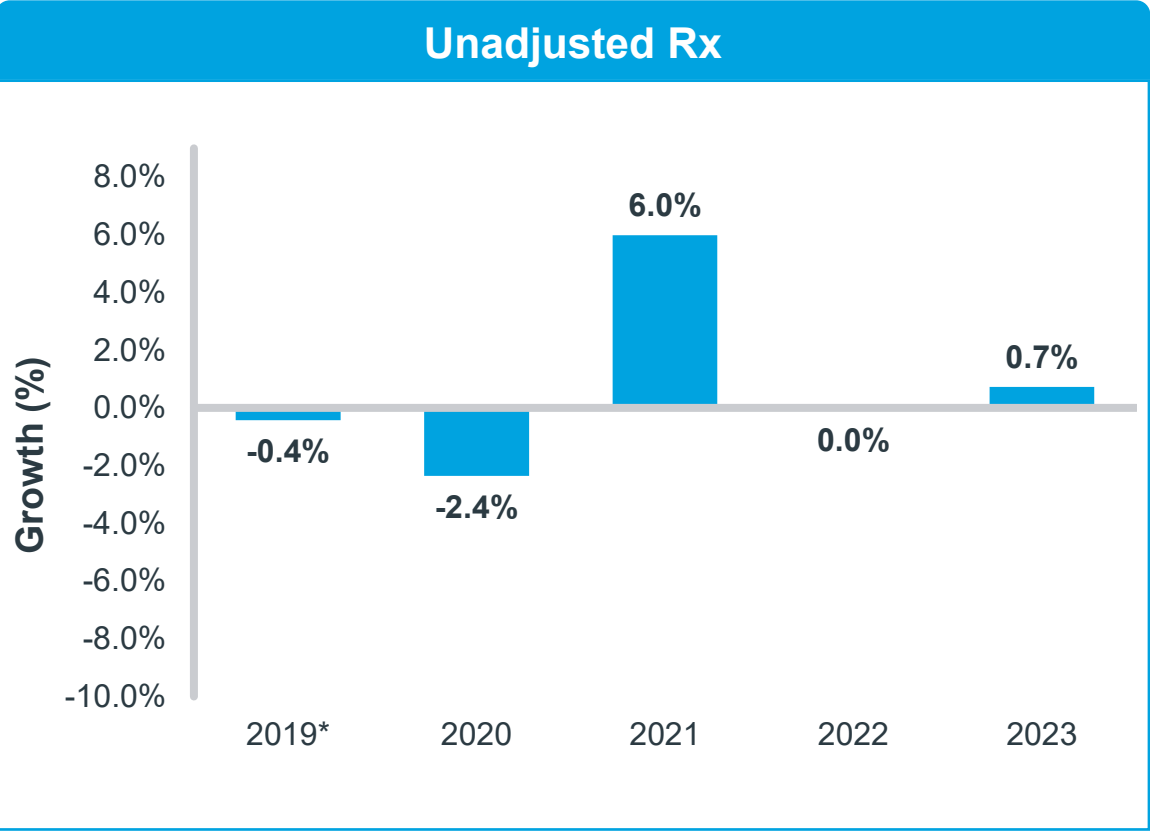
On a monthly basis, Chain stores see the most volume, but all stores have seen large increases since January 2020



Data Source: The store count data is reflective of the stores in the IQVIA Rx Universe as of December 2023.

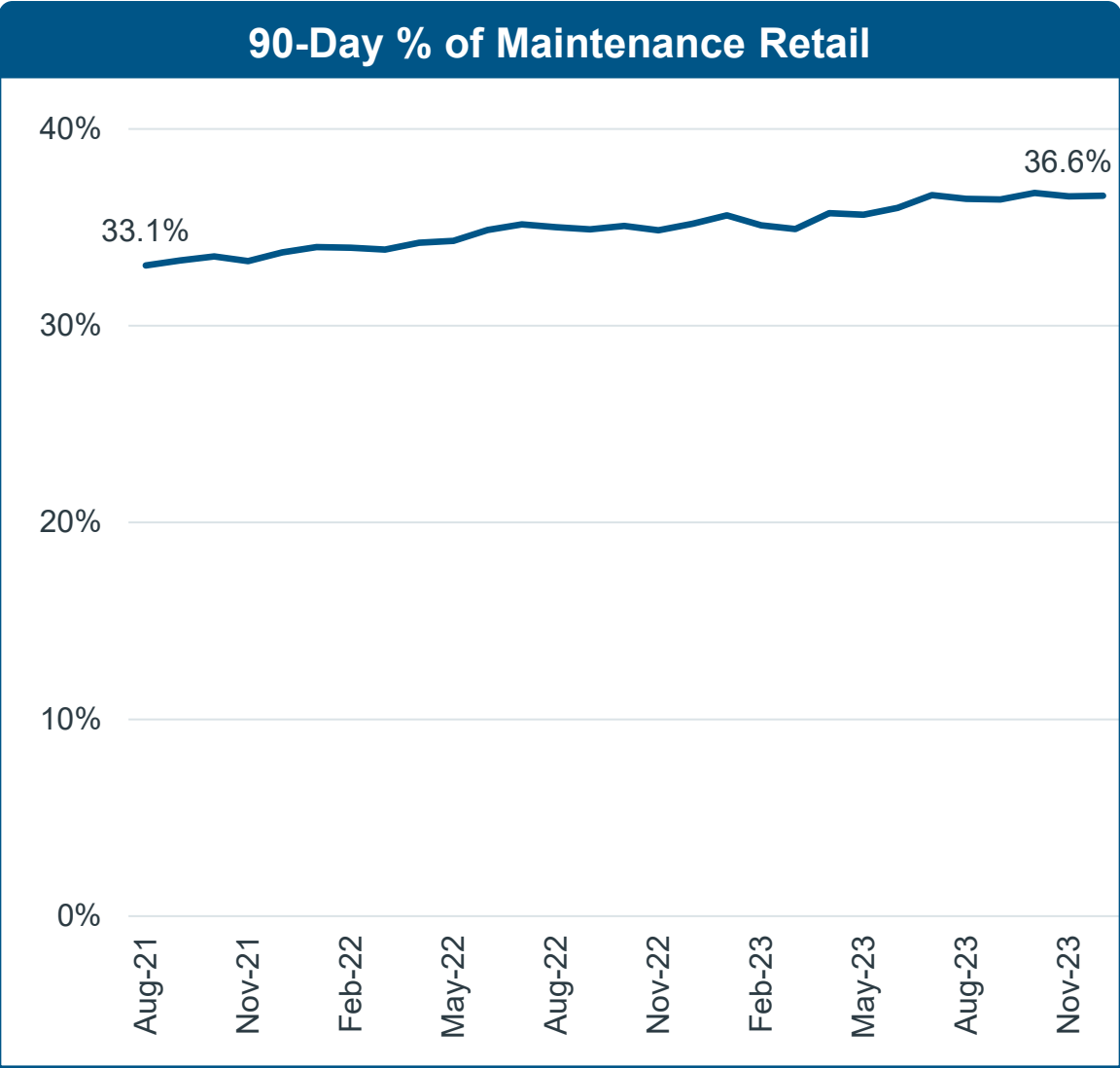
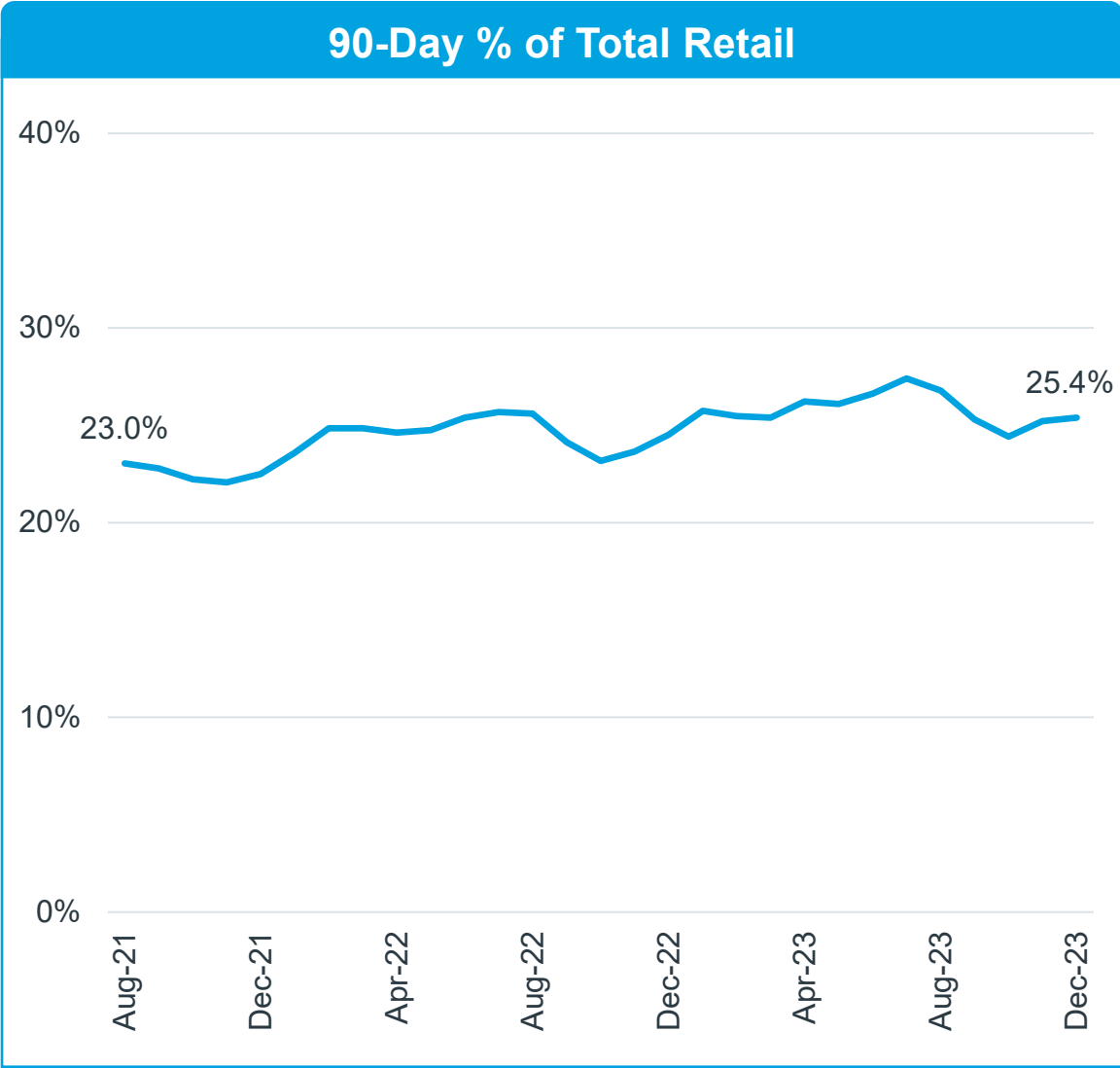
Unadjusted Rx growth for 2023 is positive, and Adjusted Rx growth is higher for same periods

Growth (%) of Total Market Dispensed Rx

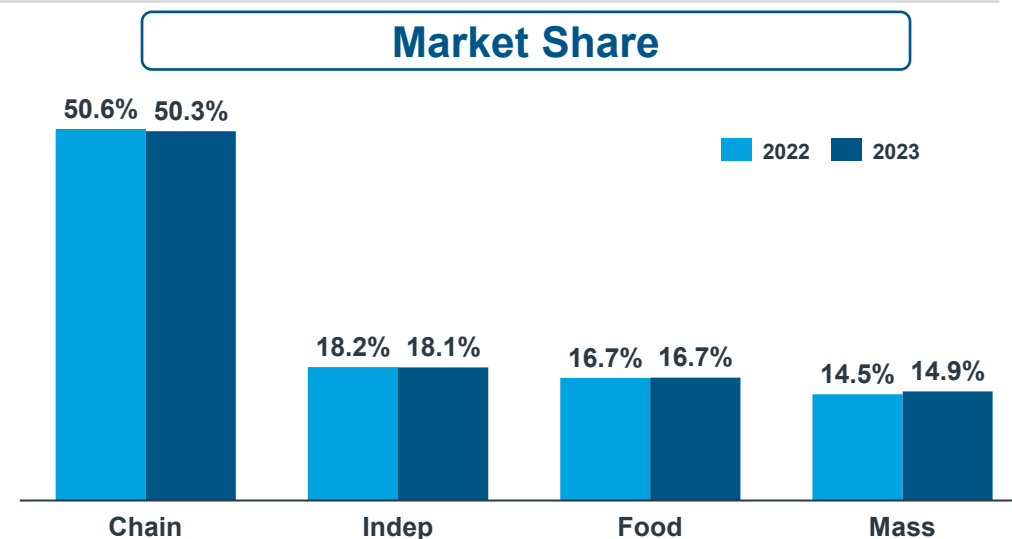
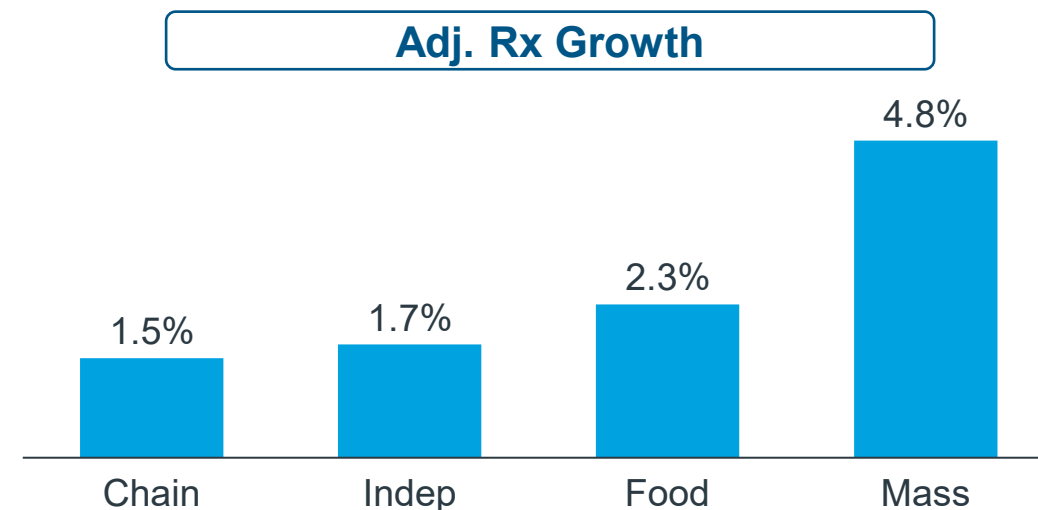
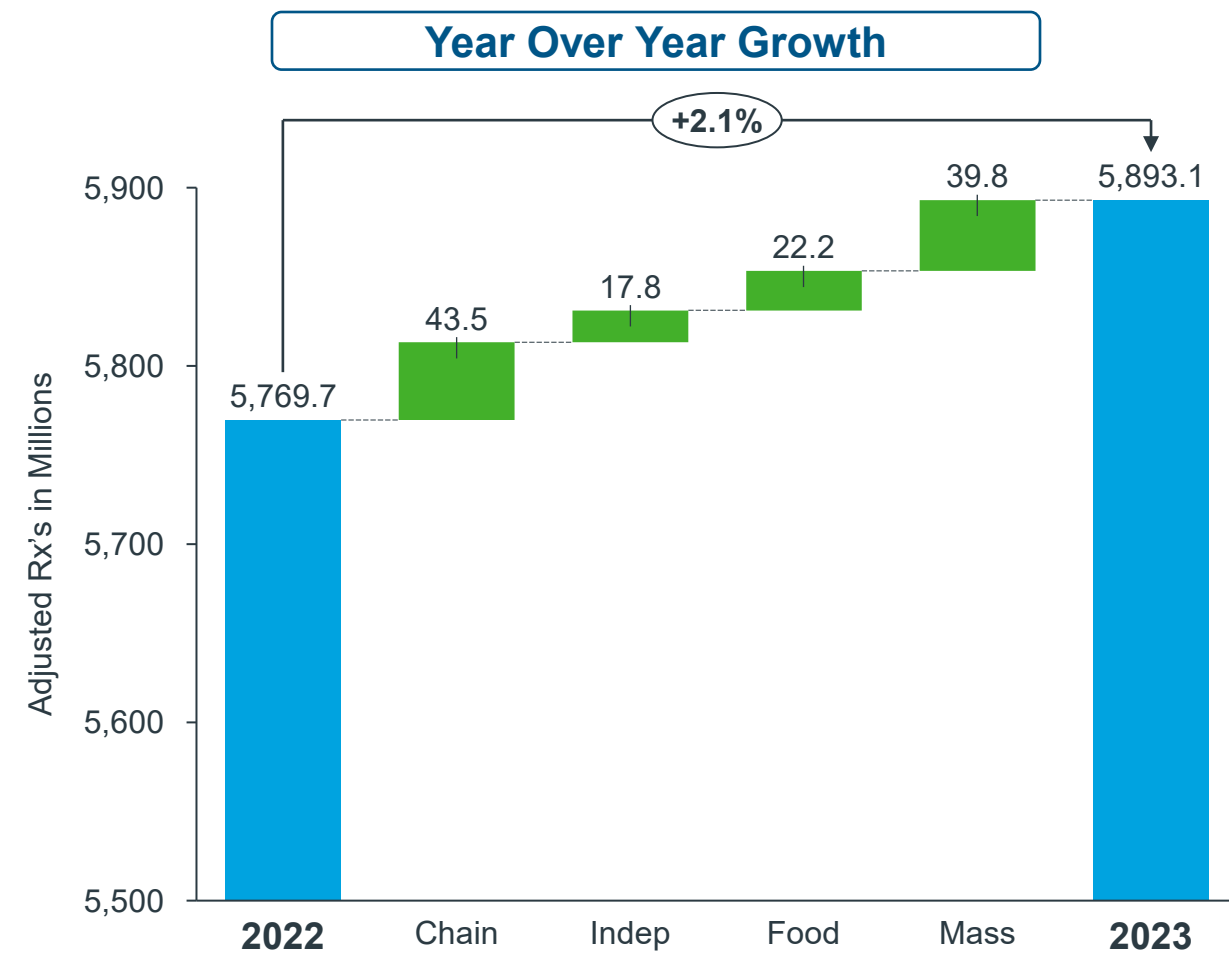


Source: IQVIA, National Prescription Audit & RxInsight, December 2023; Retail, Mail, and LTC limited to Rx and OTC Insulins
*Note: Declines between 2018 and 2019 are due to VRAF enhancement from 2020 onwards

90-Day percentage of Maintenance increases over time

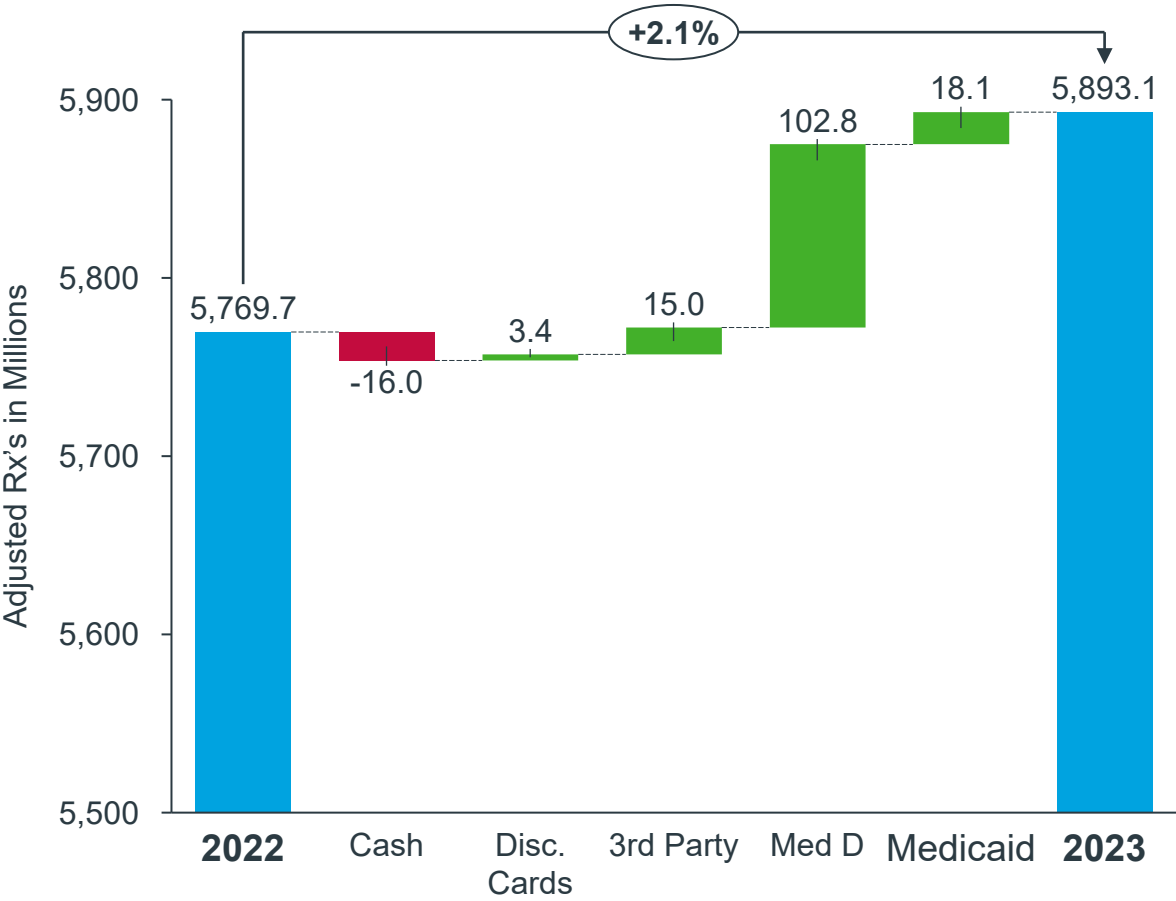


In Retail, Chain and Mass experienced the largest volume gains

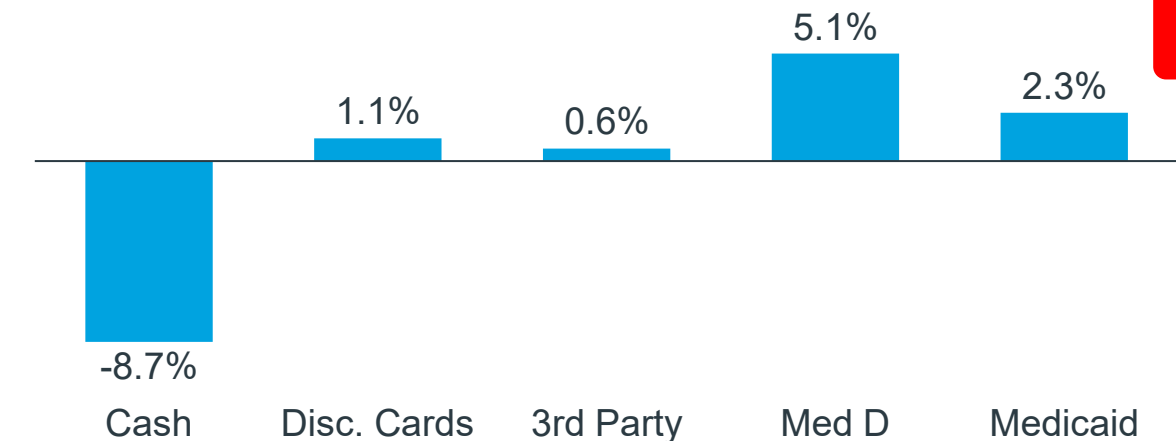


In Retail, Med D has the largest growth and market share gains

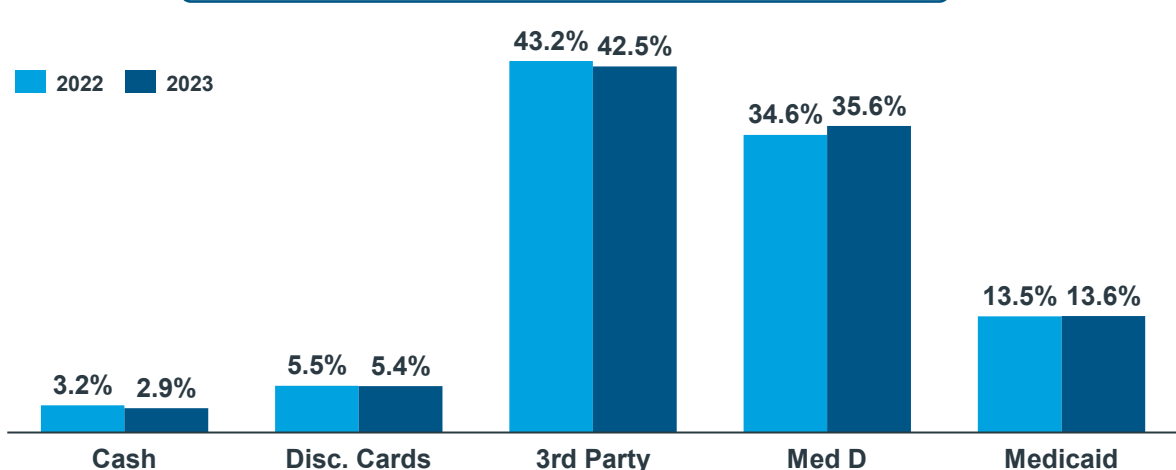
Year Over Year Growth



Adj. Rx Growth

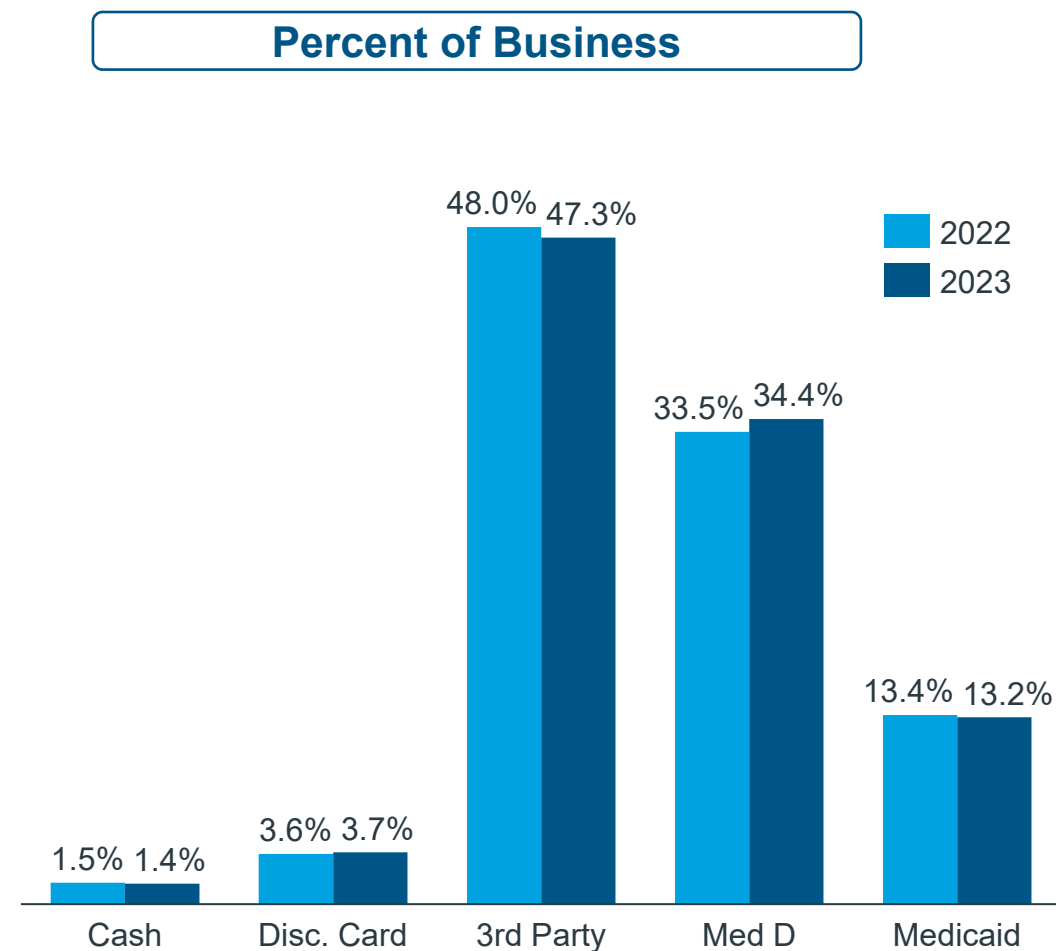
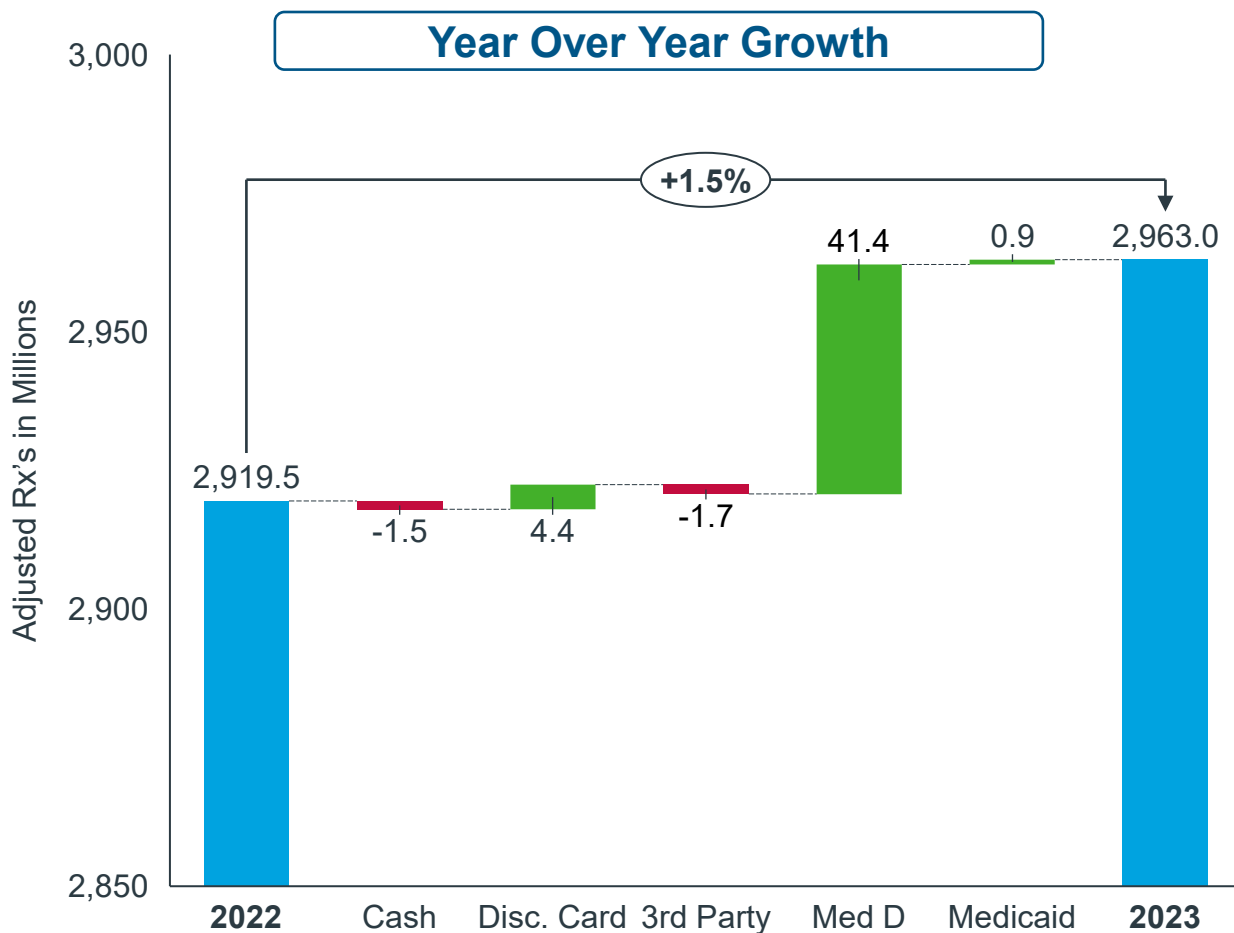


Market Share



In Chain, Med D drives Chain growth

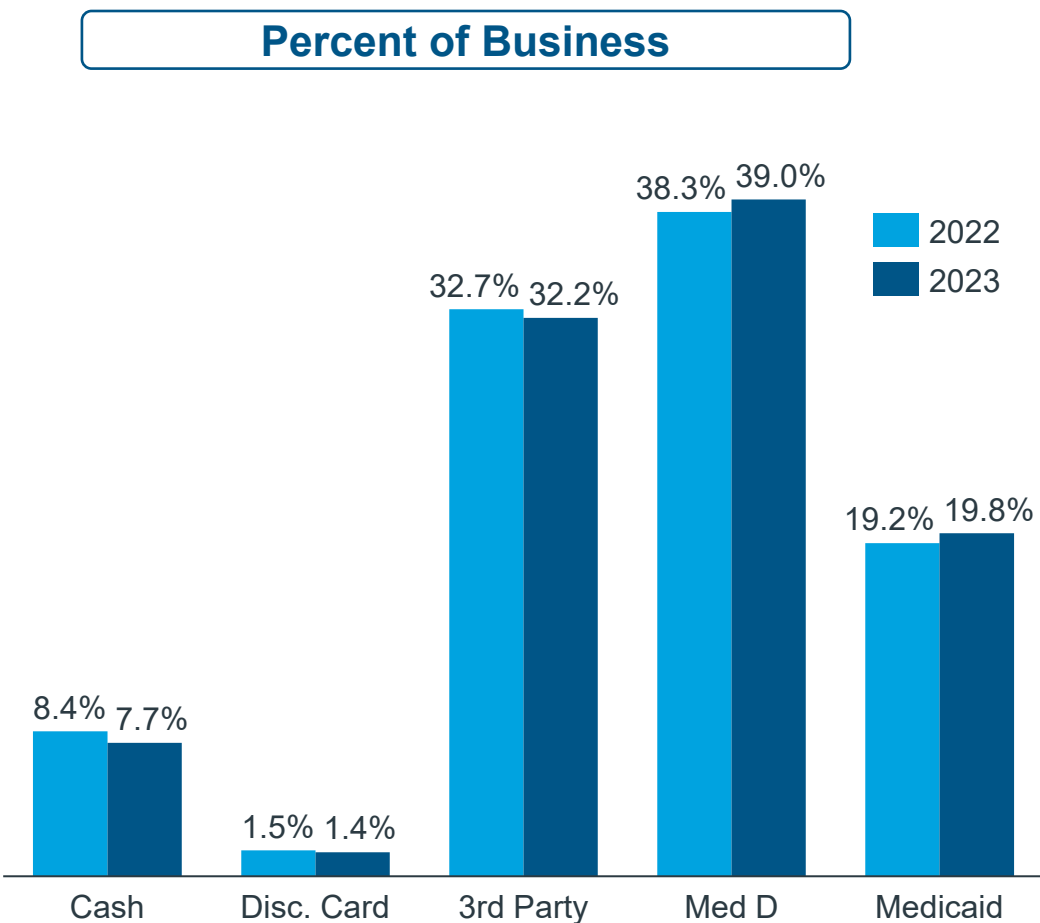
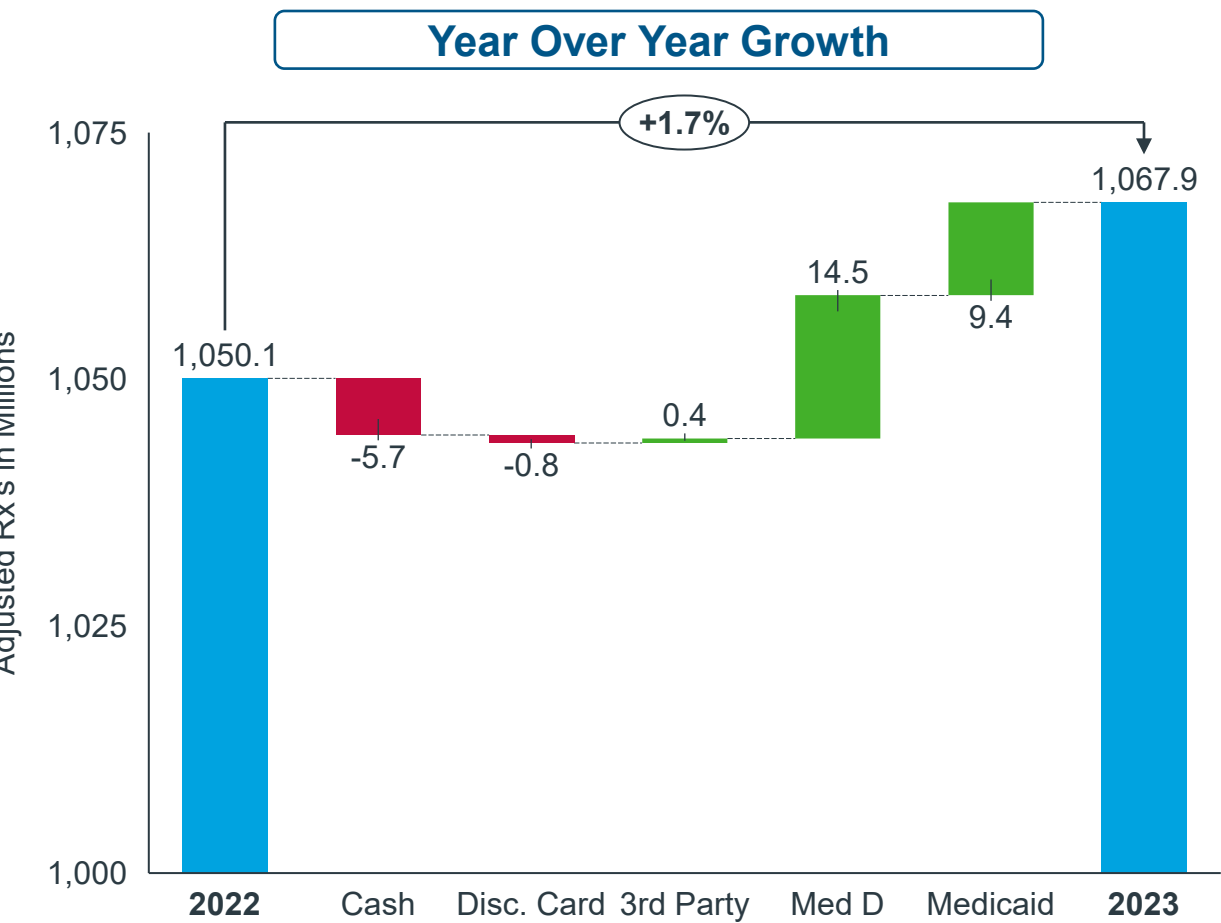
Data is based on calendar quarters, Q3 of each year



Note: Method of Payment is defined based on IQVIA's business rules

Med D drives Independent growth

Data is based on calendar quarters, Q3 of each year

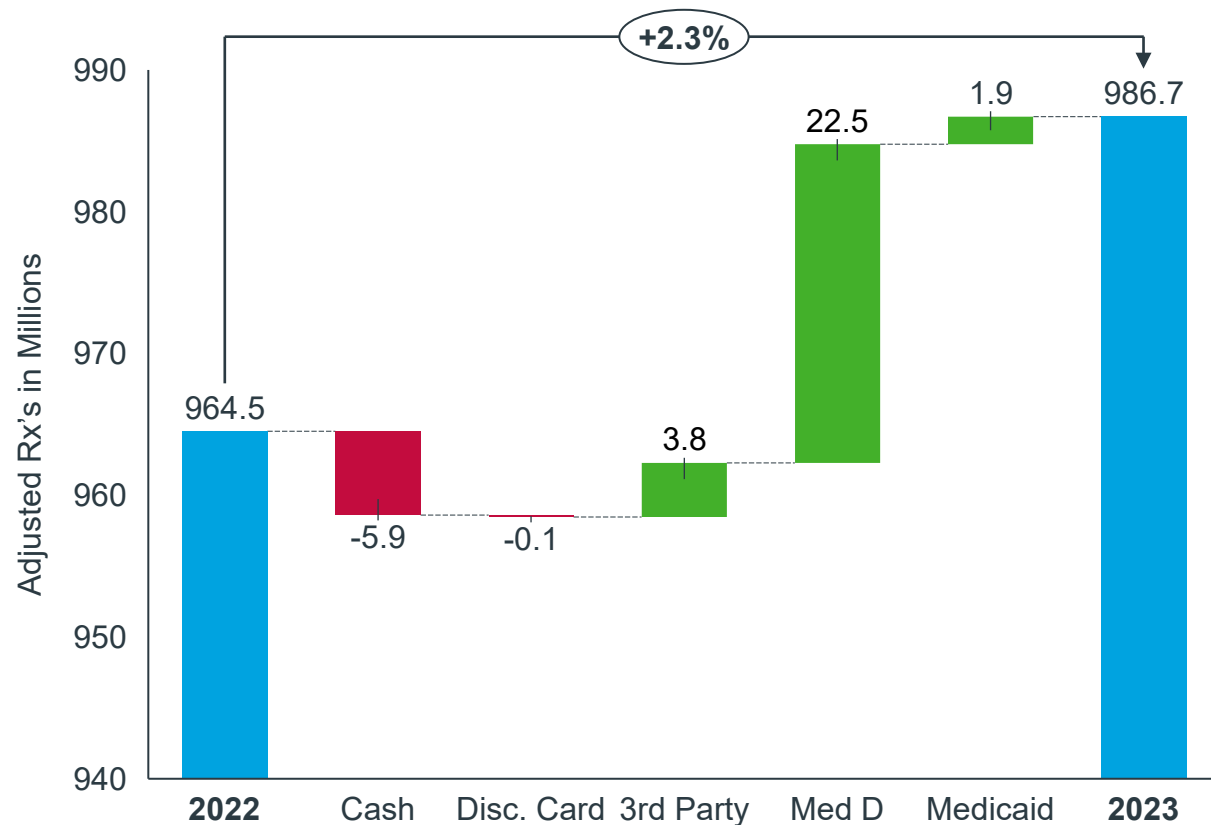


Note: Method of Payment is defined based on IQVIA's business rules

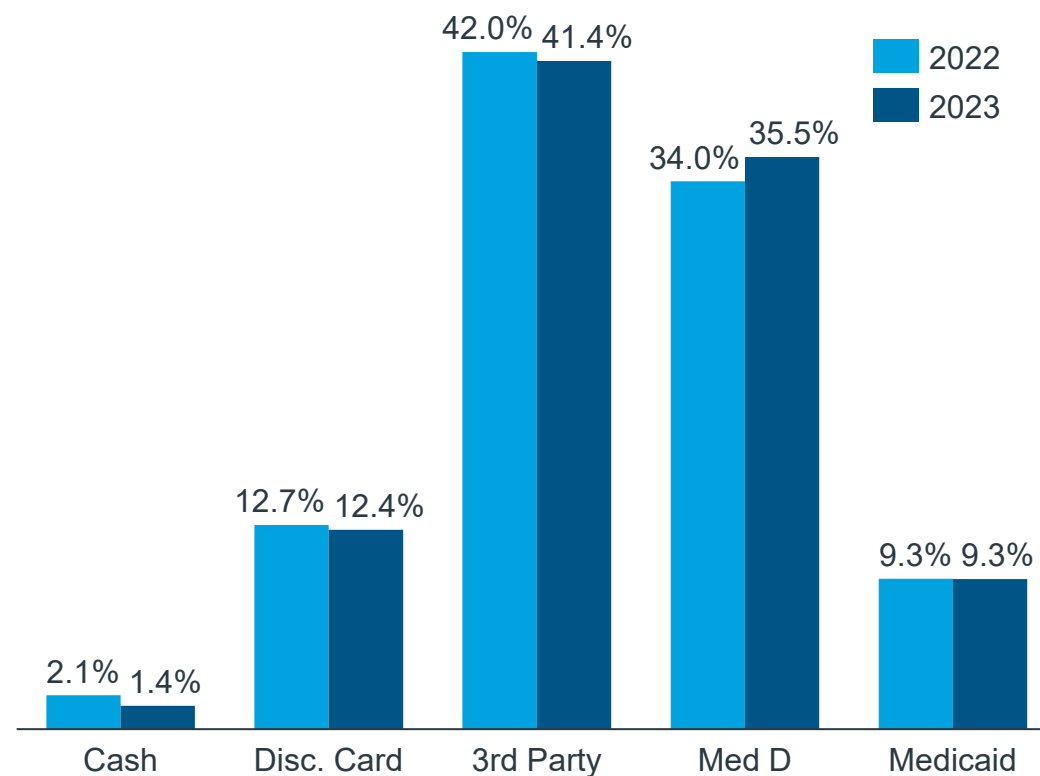
In Food, Med D is the largest driver of growth

Data is based on calendar quarters, Q3 of each year

Year Over Year Growth



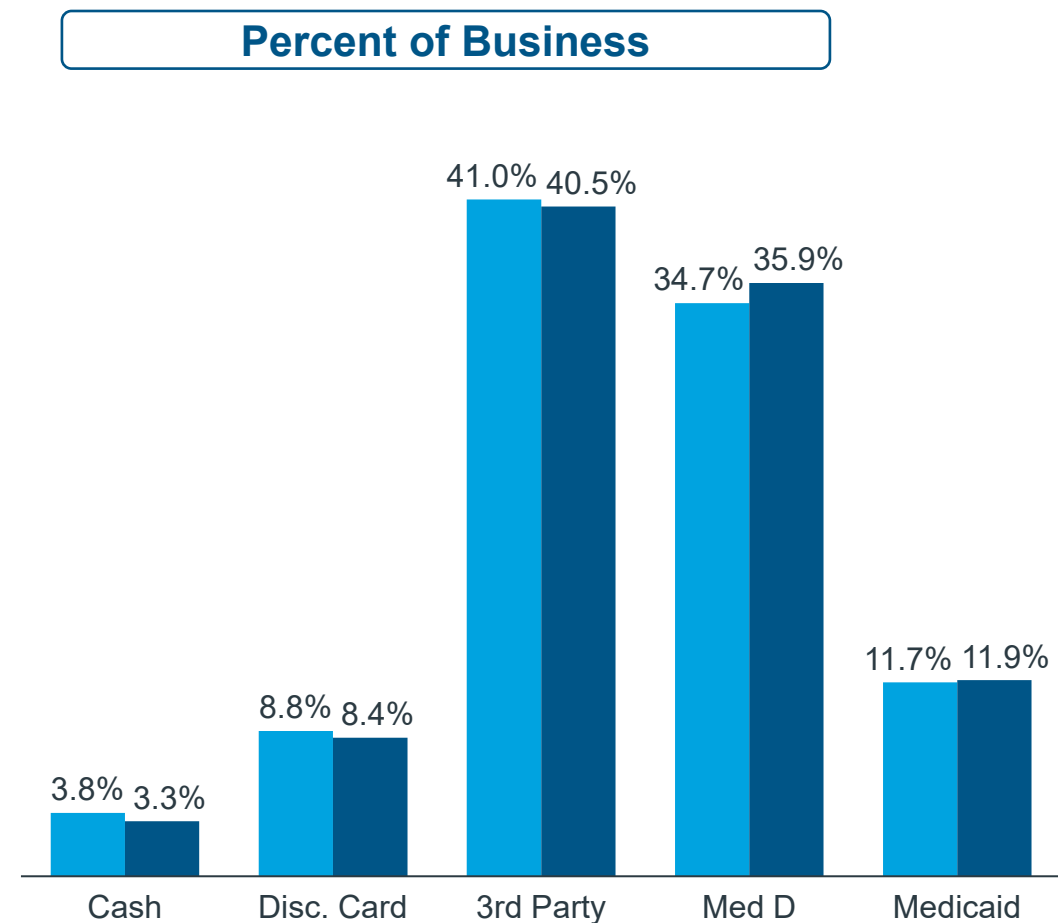
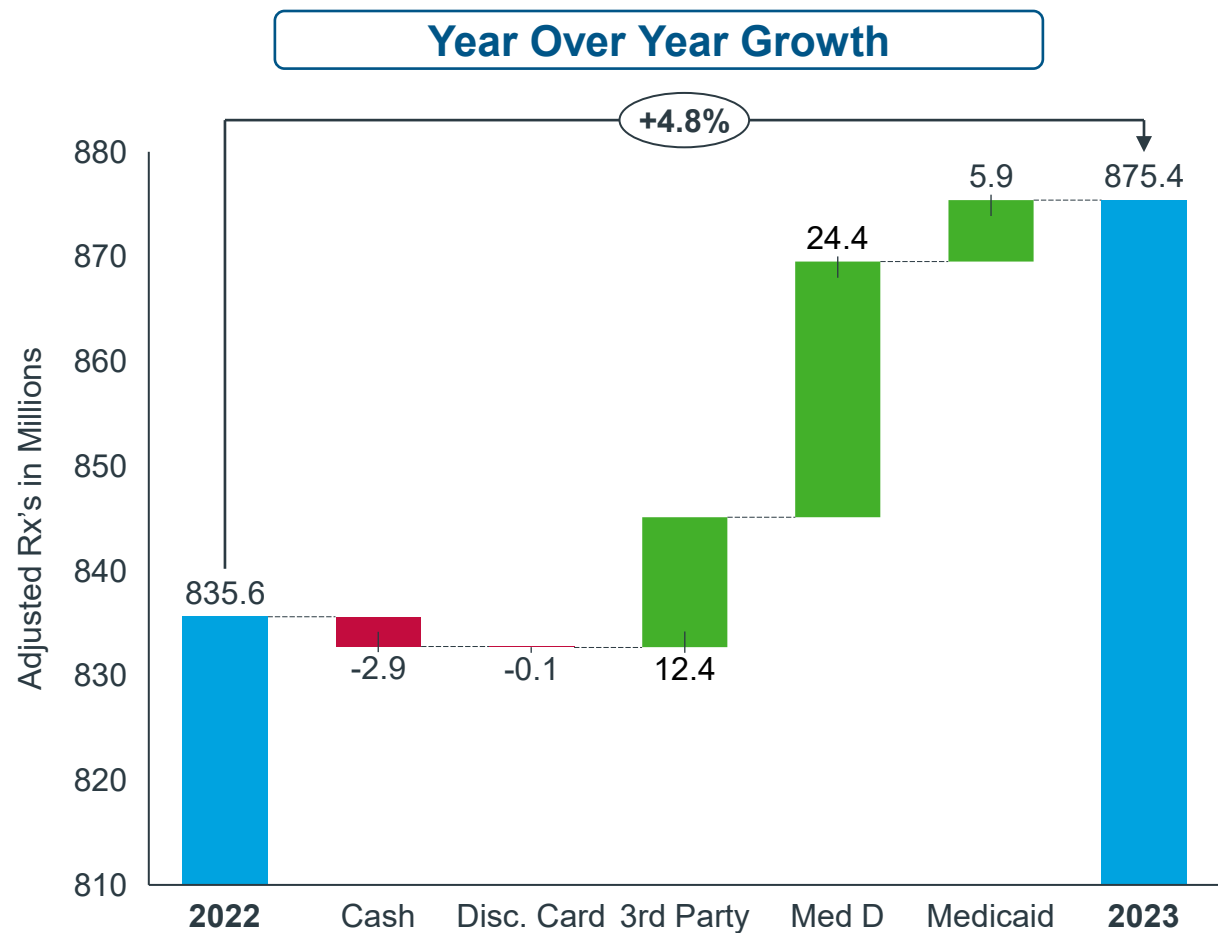
Percent of Business



Note: Method of Payment is defined based on IQVIA's business rules

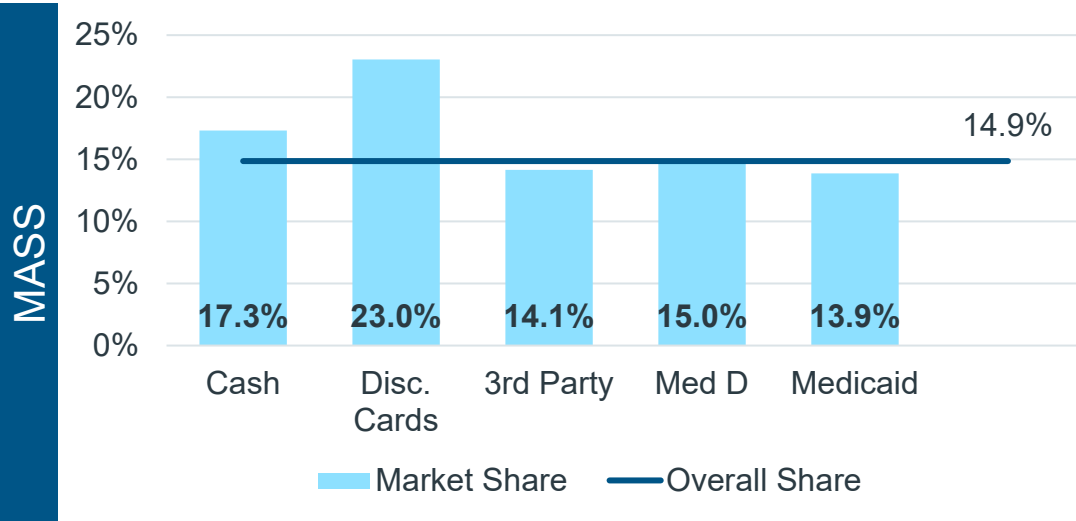
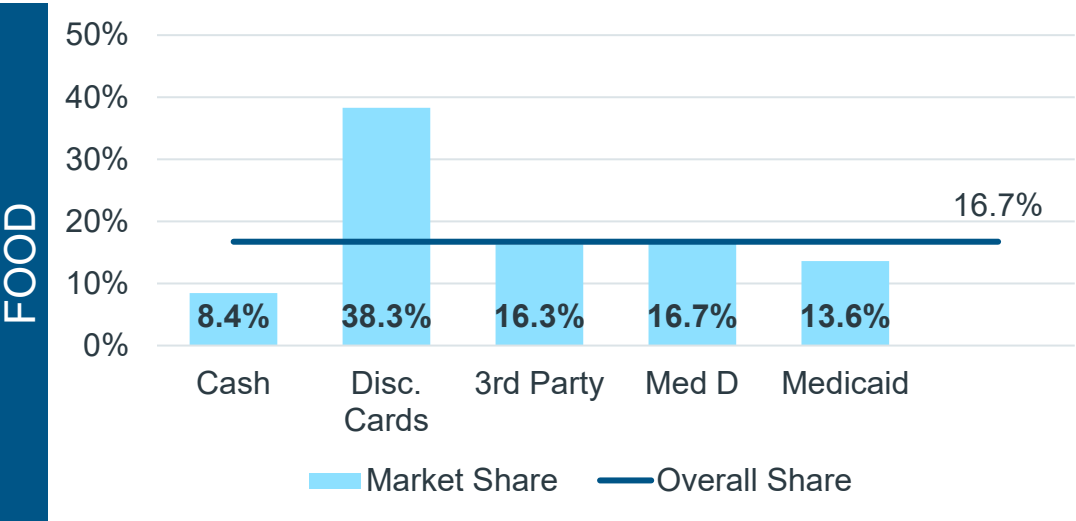
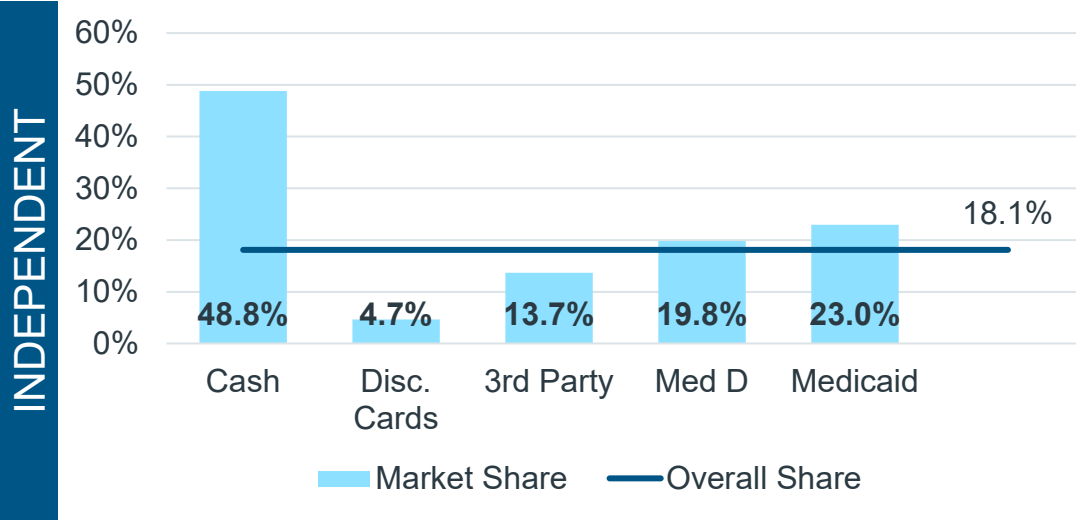
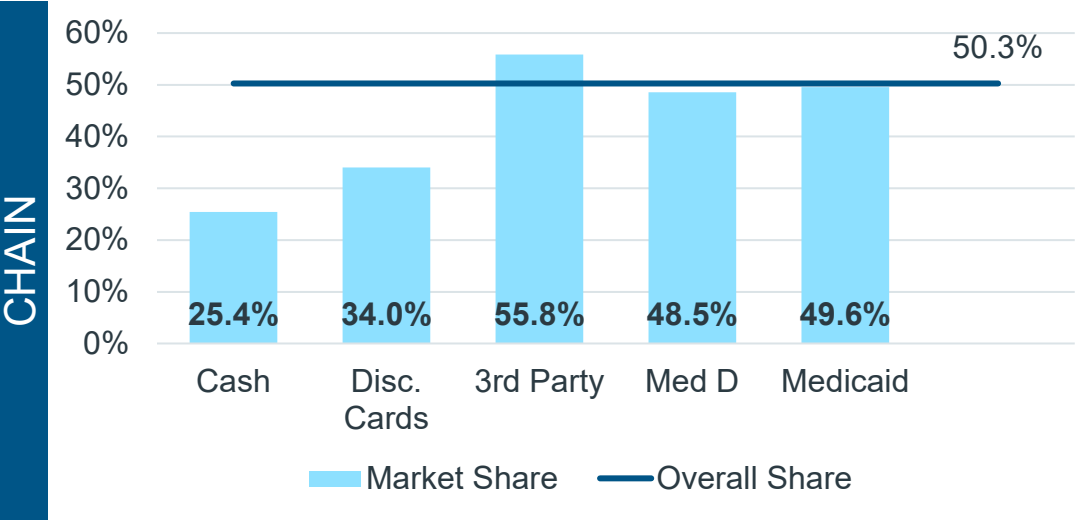
In Mass, Med D is driving growth

Data is based on calendar quarters, Q3 of each year

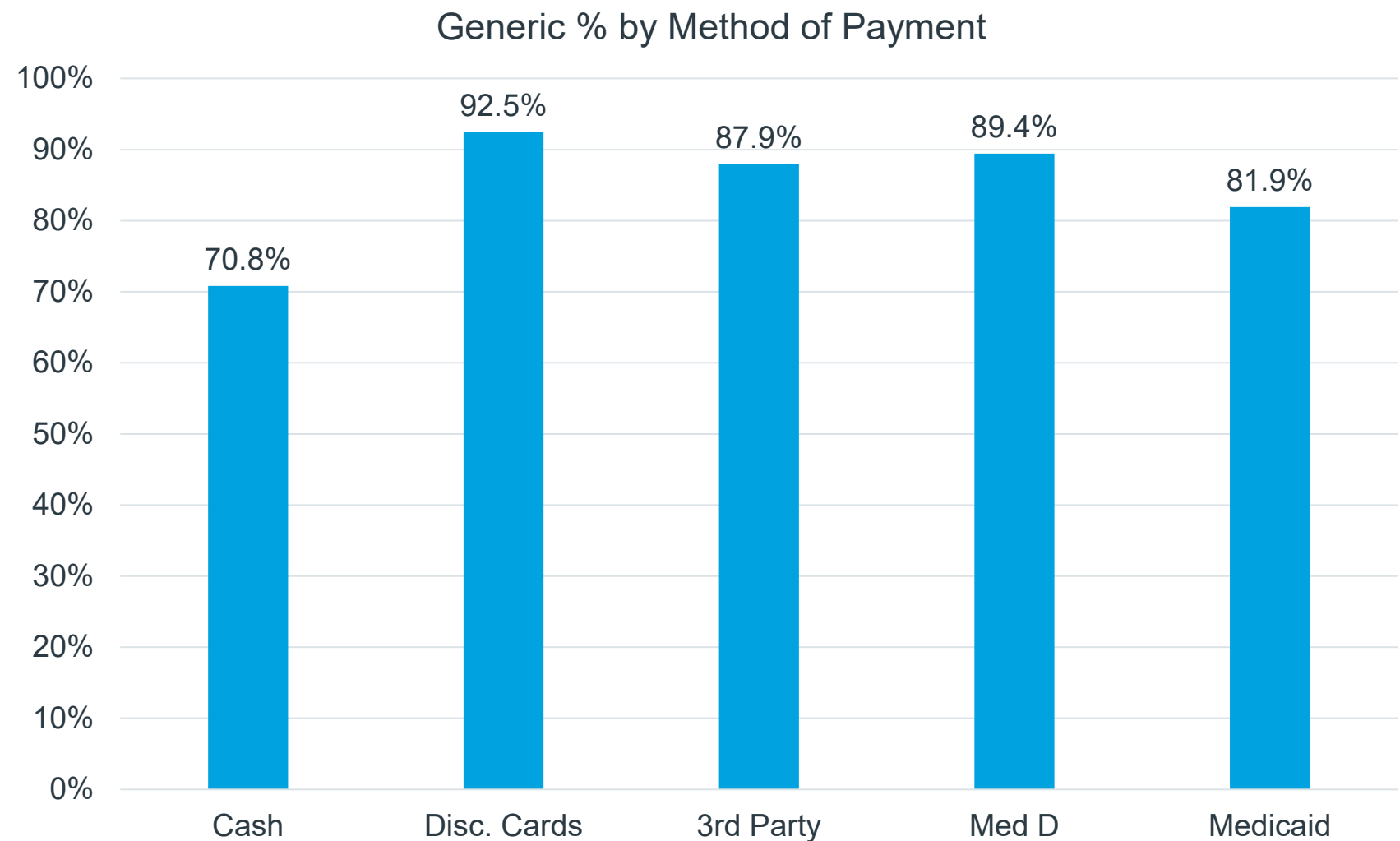


Note: Method of Payment is defined based on IQVIA's business rules

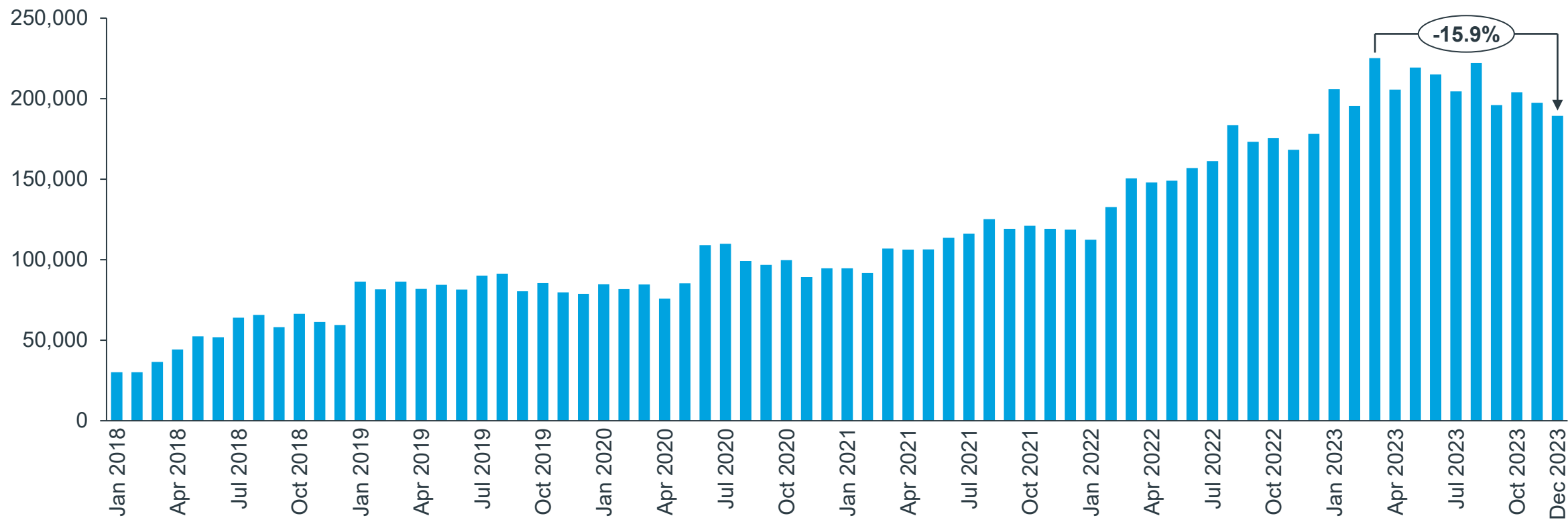
Chain over-indexes with 3rd Party, Independents with Cash, Food and Mass with Discount Cards



Discount Cards have the highest percentage of generics



Since the FDA approved nonprescription Narcan last March*, there has been a 16% decrease in prescription Narcan at Retail



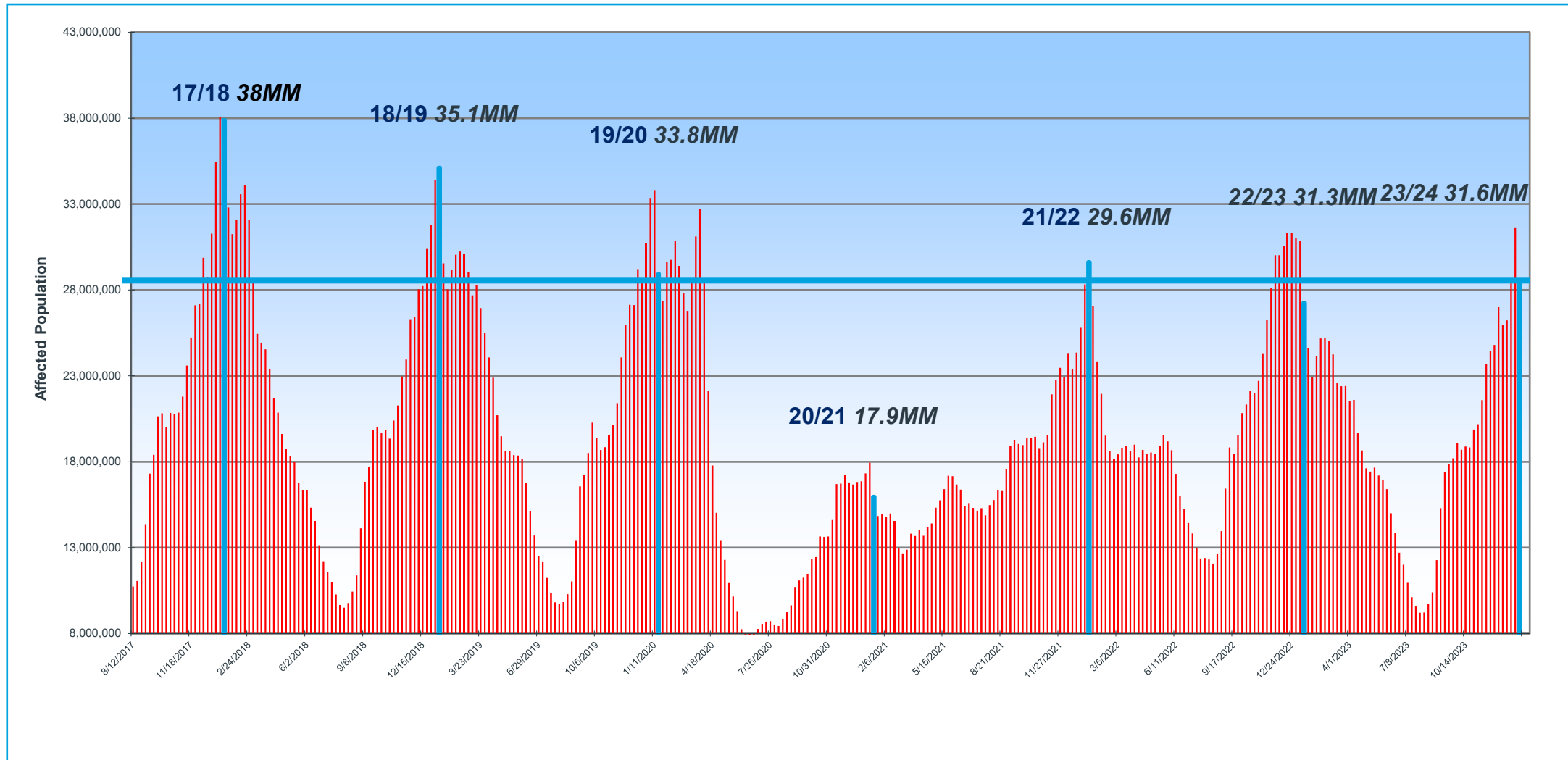
* <https://www.fda.gov/news-events/press-announcements/fda-approves-first-over-counter-naloxone-nasal-spray>

Cough, Cold and Flu Season and Vaccines



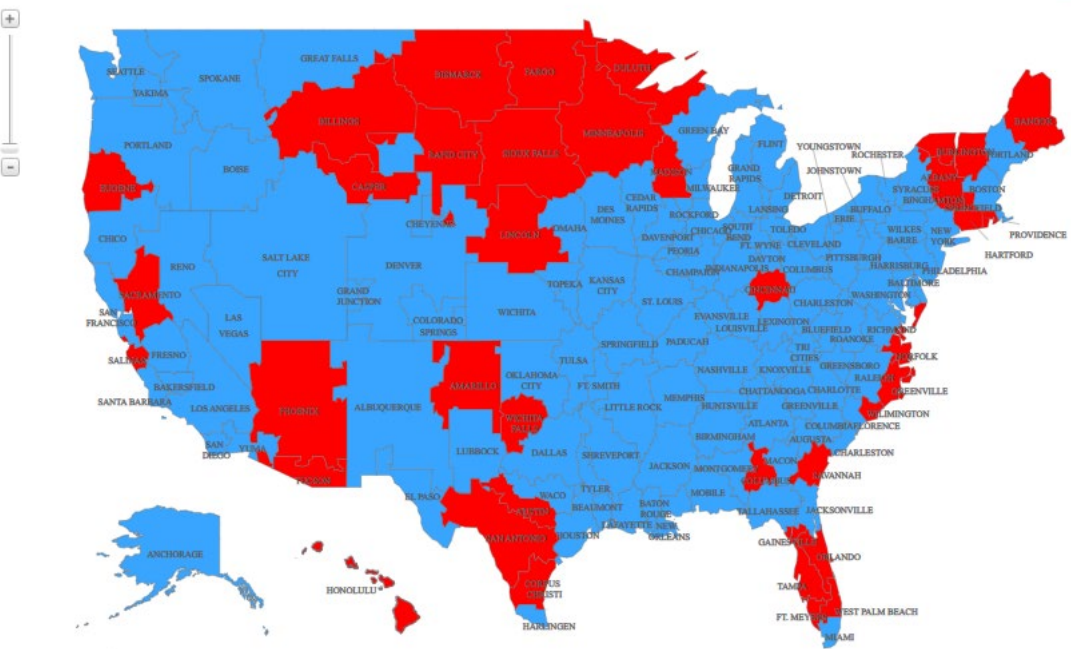
FAN Total Affected Population 2017/18 through 2023/24

- *The current AP levels are trending above prior season by +4.2%.*
- *Expect to see illness rebound as we go into to Q1, however the question is when!*

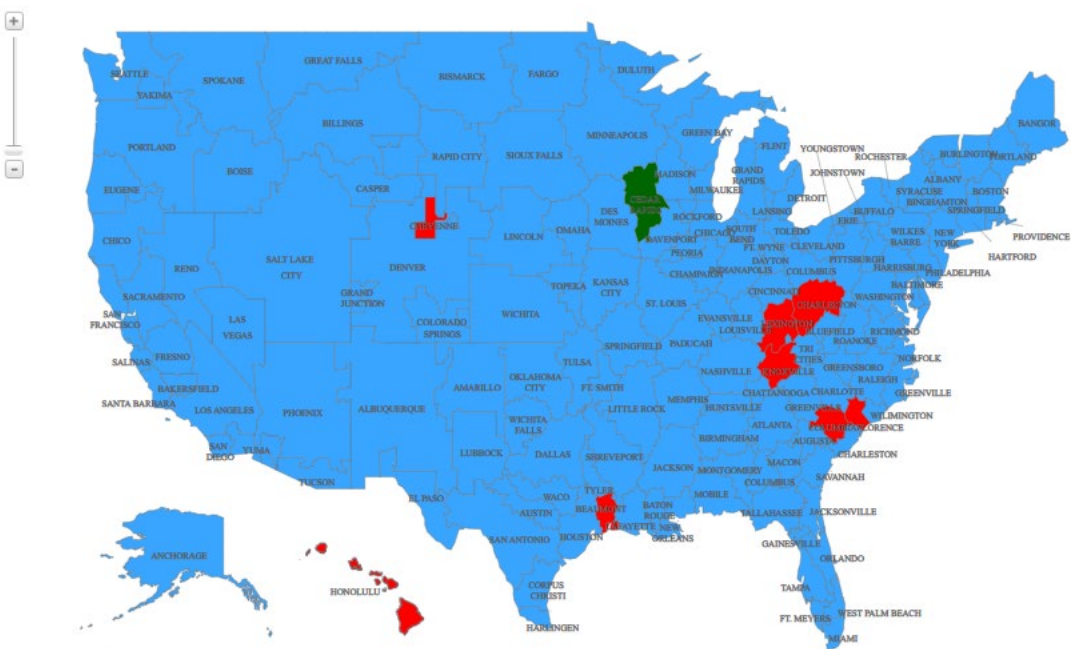


Compared to last season, more of the country is currently in Alert status

Current Season
Week Ending 2/3/24

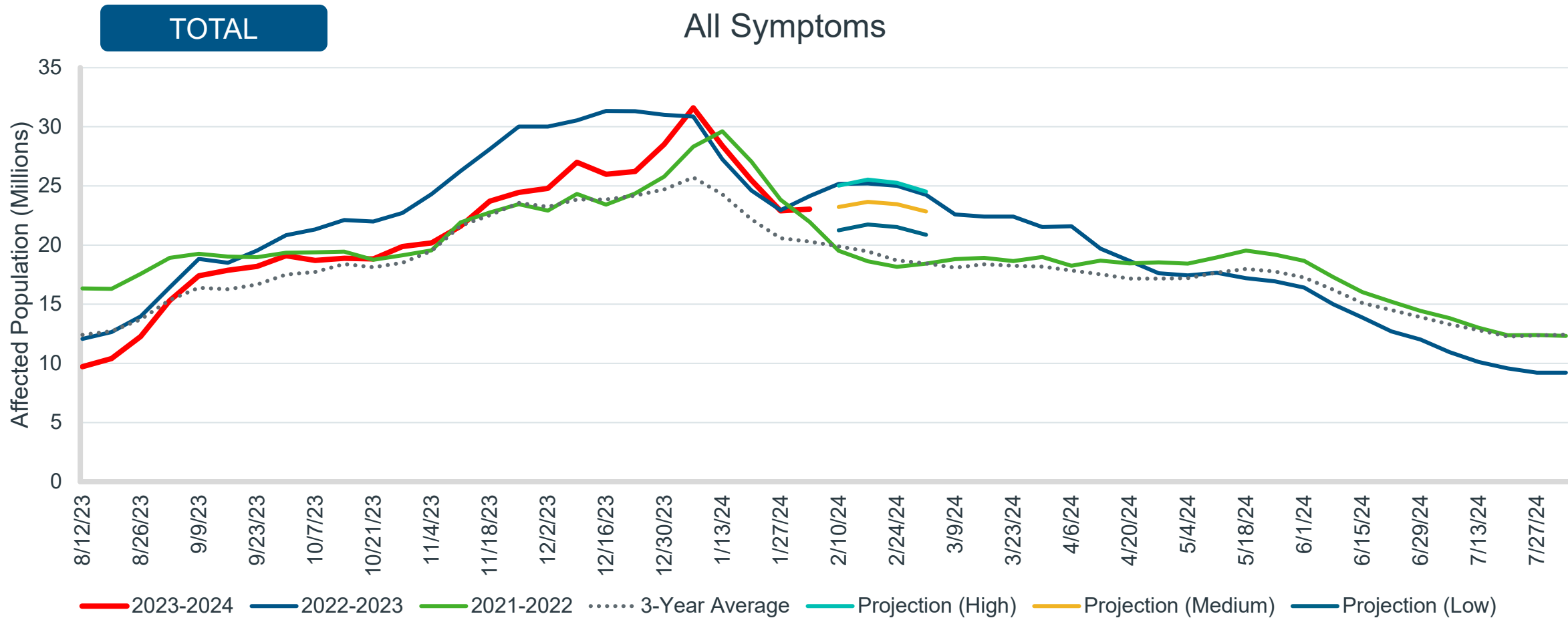


Current Week, Previous Season
Week Ending 2/4/23



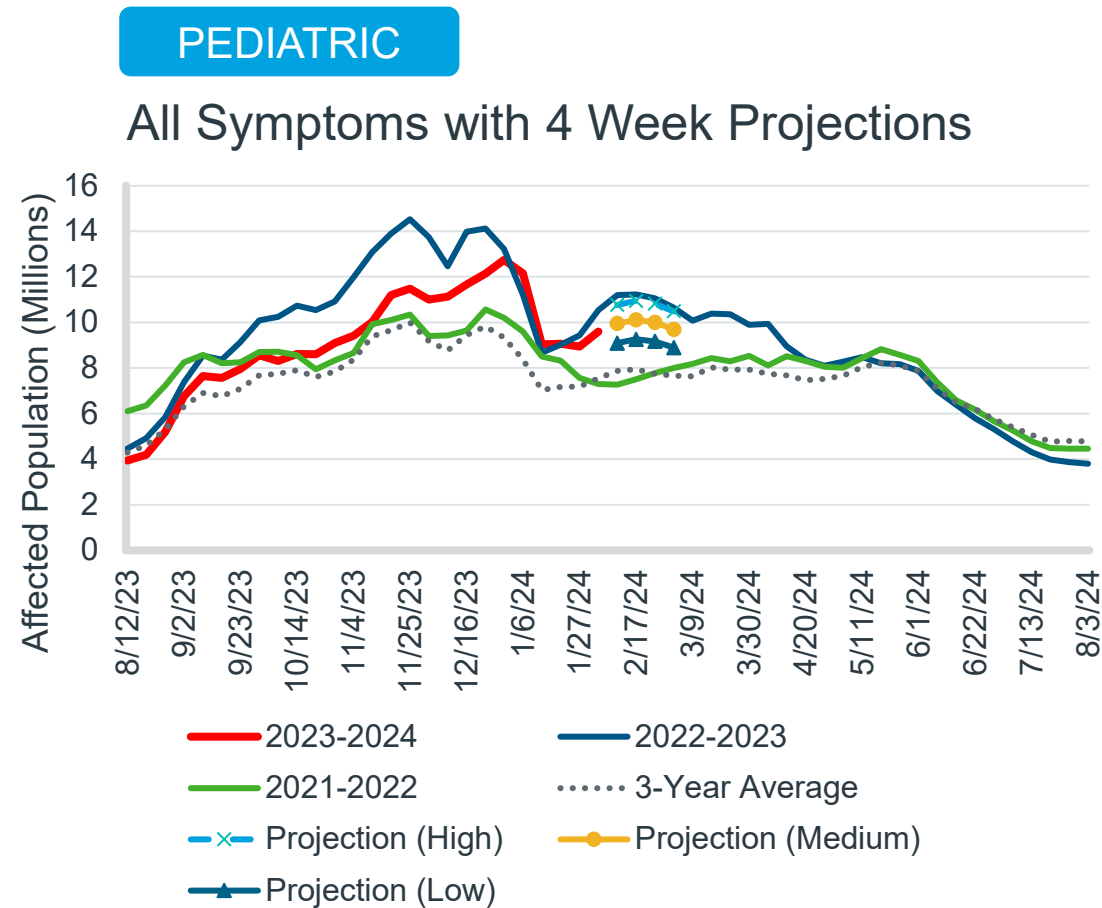
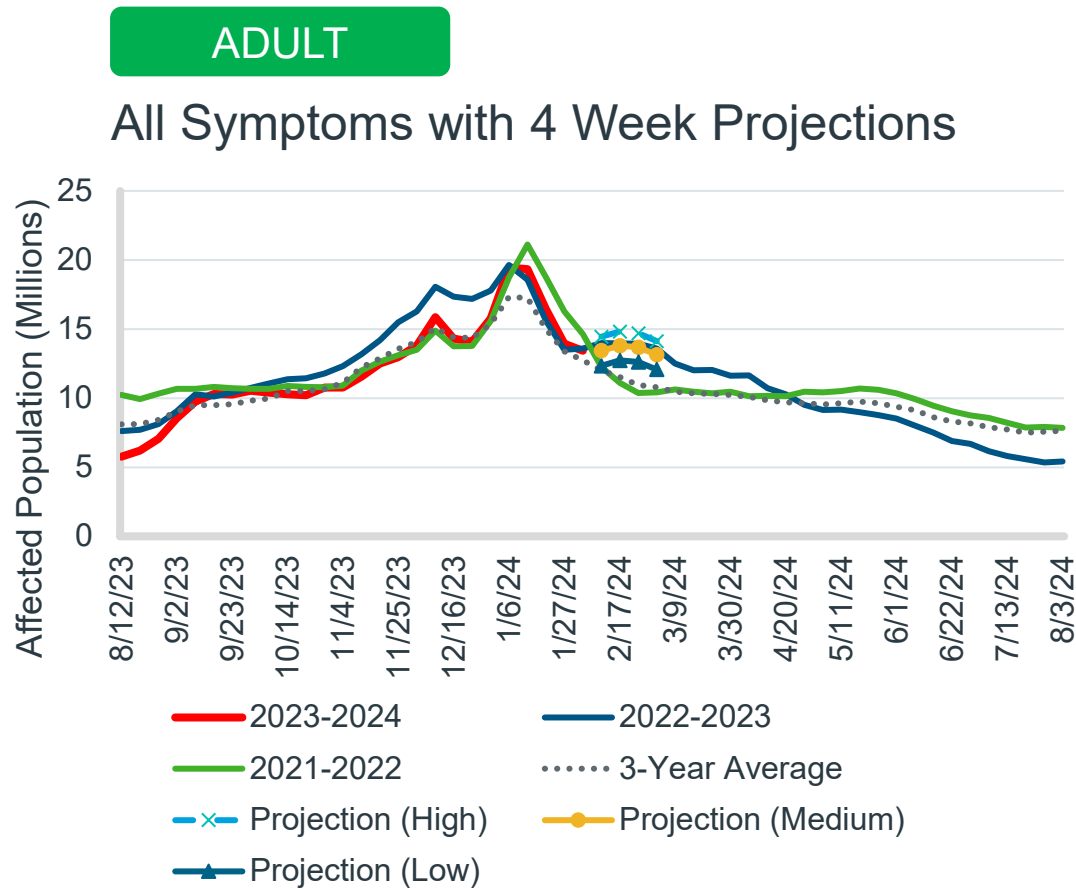
Normal Advisory Up Pre-Alert Alert Advisory Down

All FAN[®] symptoms are currently running in line with last season



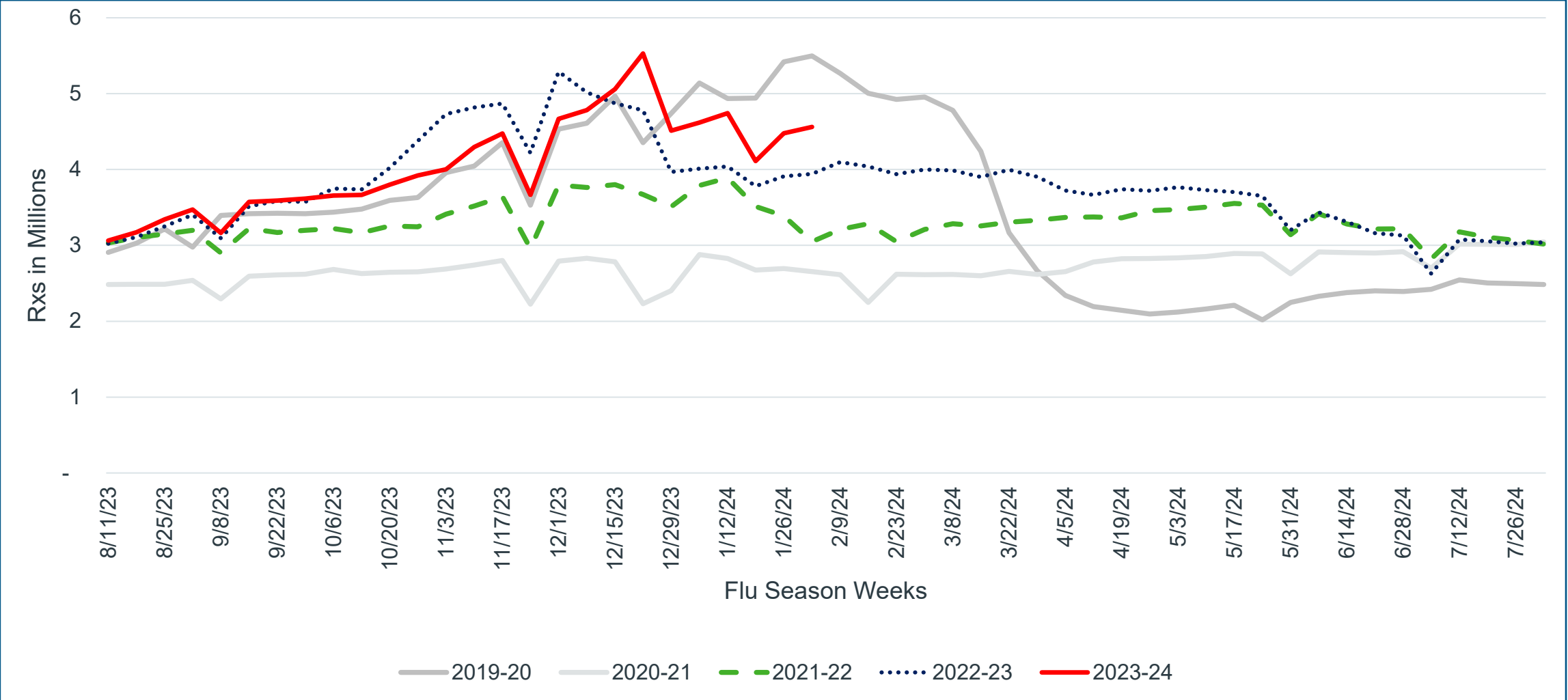
Updated through February 3, 2024

Adult and pediatric symptoms are currently running in line with the 2022-2023 season

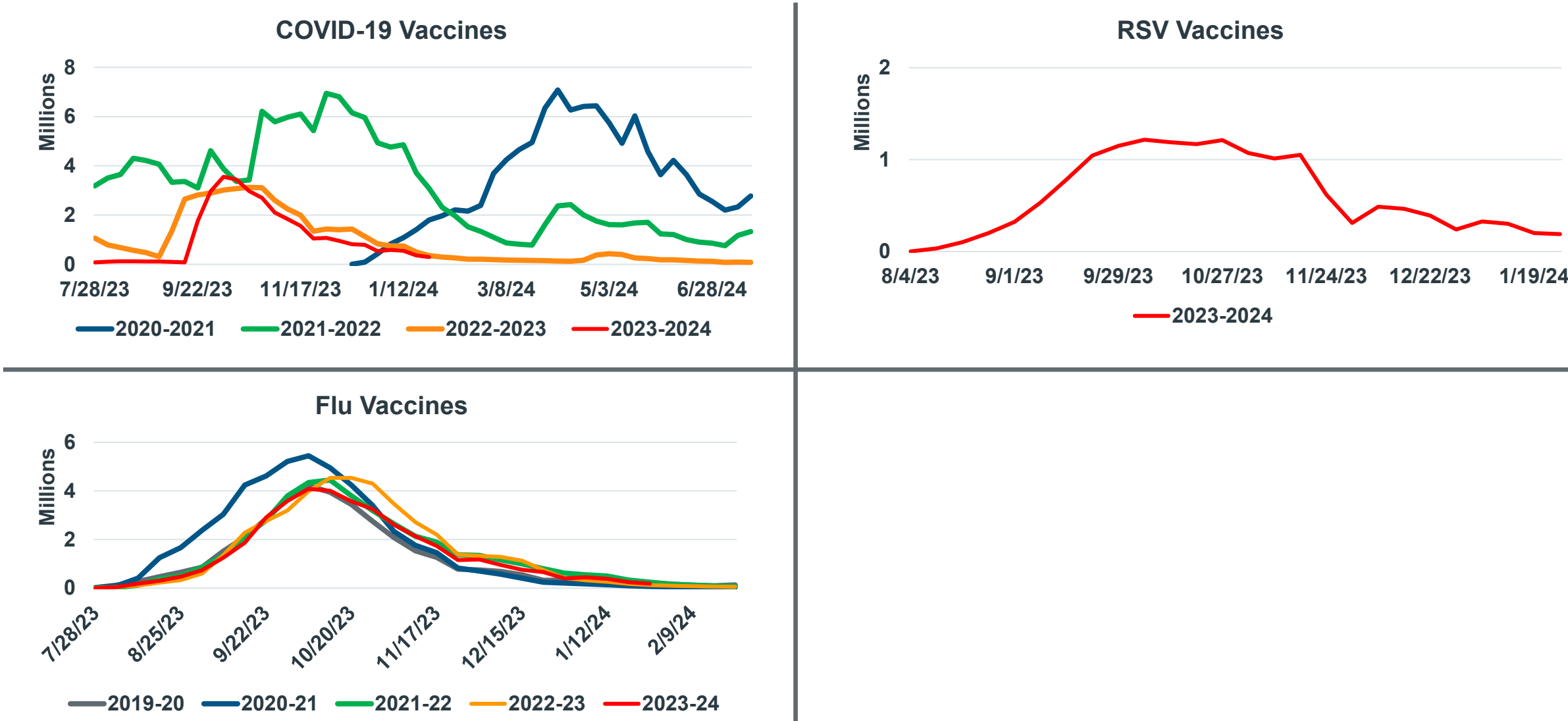


Updated through February 3, 2024

Currently, this Cough, Cold and Flu Season's Rxs are running above last season

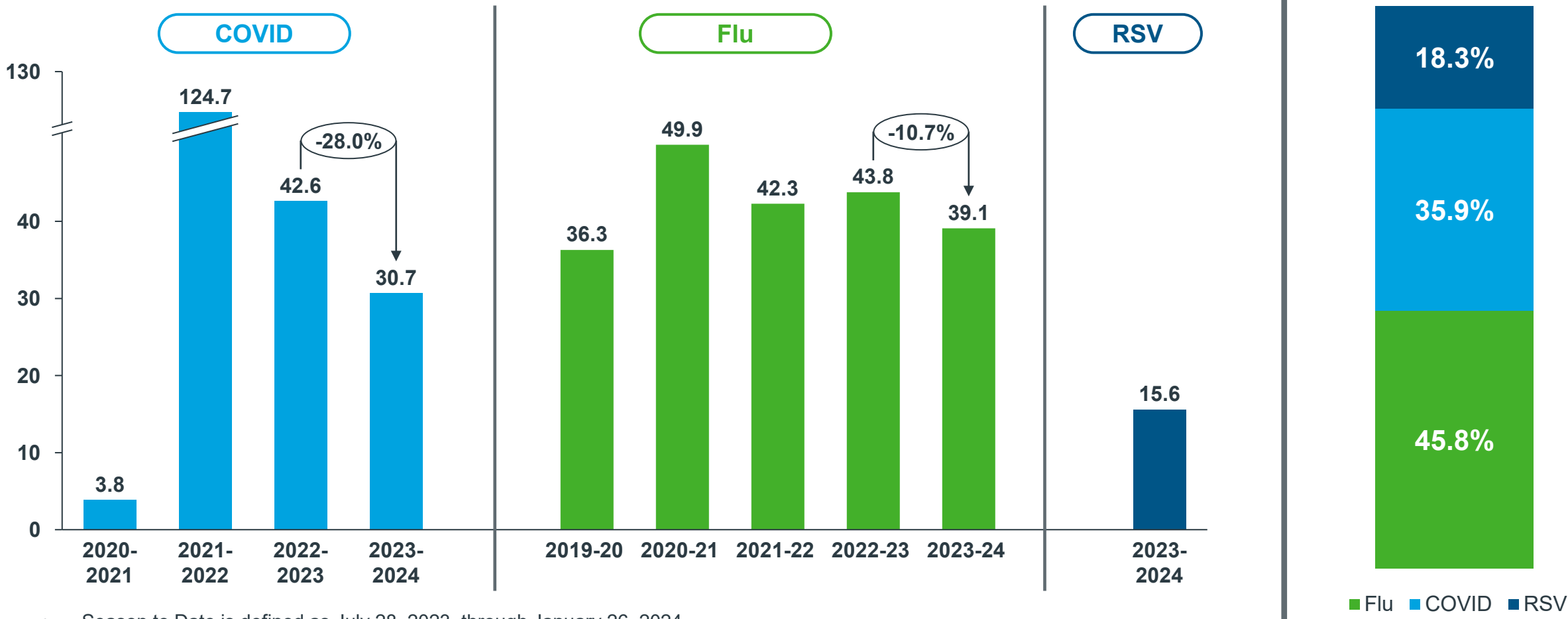


COVID-19 and Flu Vaccines are lower this season than prior seasons; RSV Vaccines are new this season



COVID and Flu vaccines at Retail are down on a year over year basis

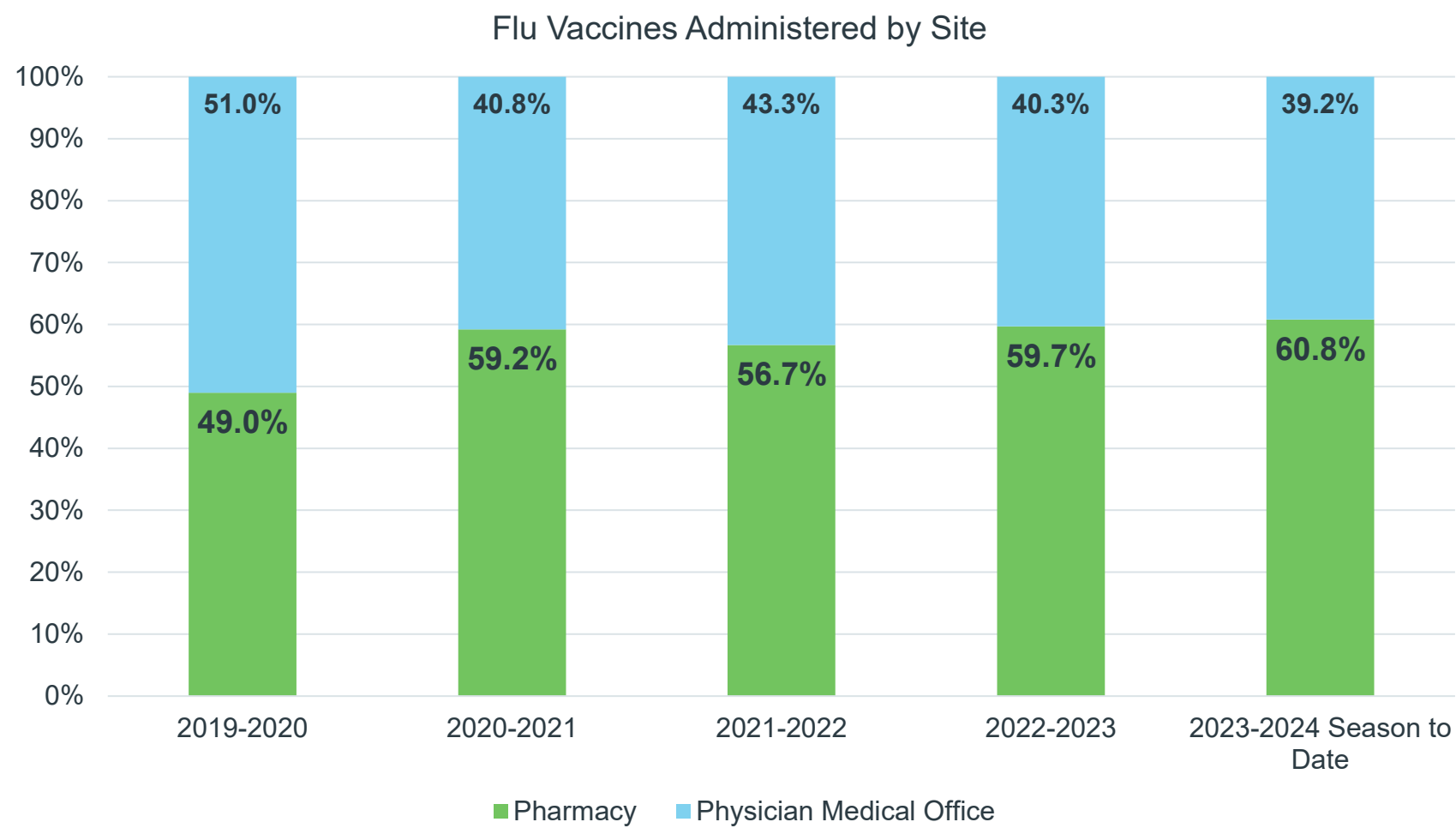
Season to Date Vaccine Volumes at Retail



- Season to Date is defined as July 28, 2023, through January 26, 2024
- Data represents vaccinations done at retail and processed through the pharmacy’s dispensing system

Season to date 60.8% of flu vaccinations are administered in a pharmacy setting

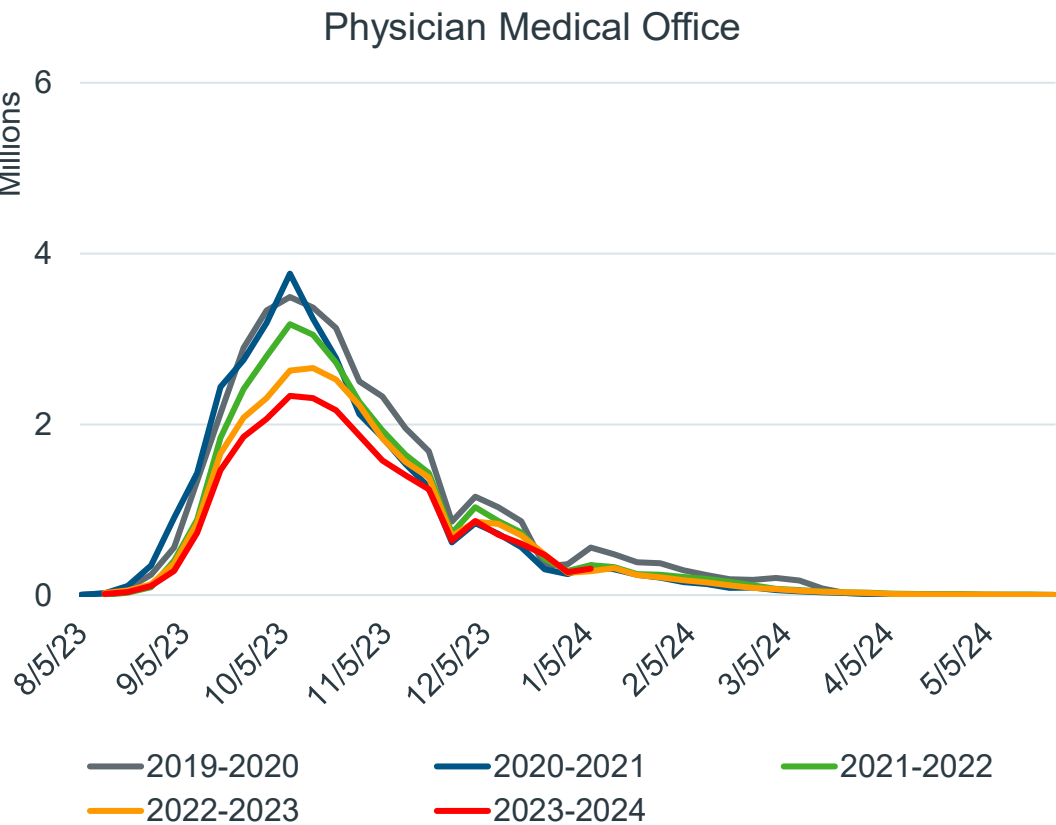
Pharmacy has moved from 49% to almost 61% of flu vaccines administered



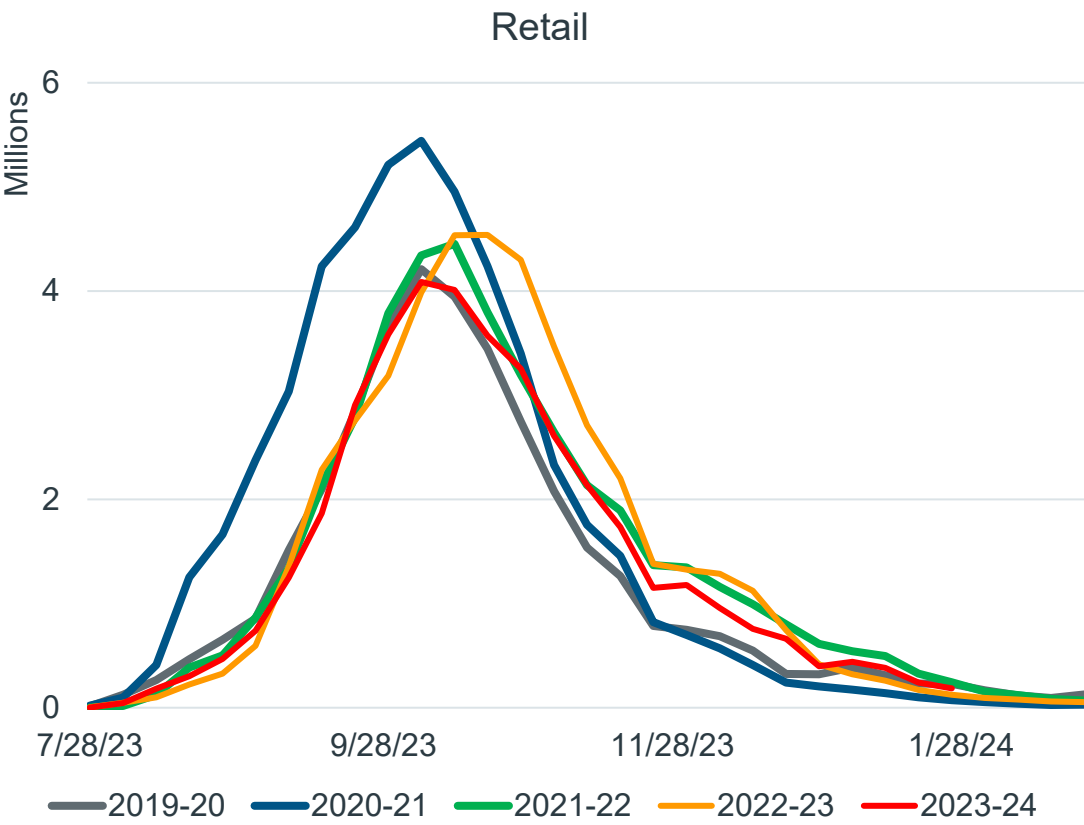
Source: <https://www.cdc.gov/flu/fluview/dashboard/vaccination-administered.html>

Flu vaccines follow similar trends in physician offices as they do in retail

Flu Vaccination Administration

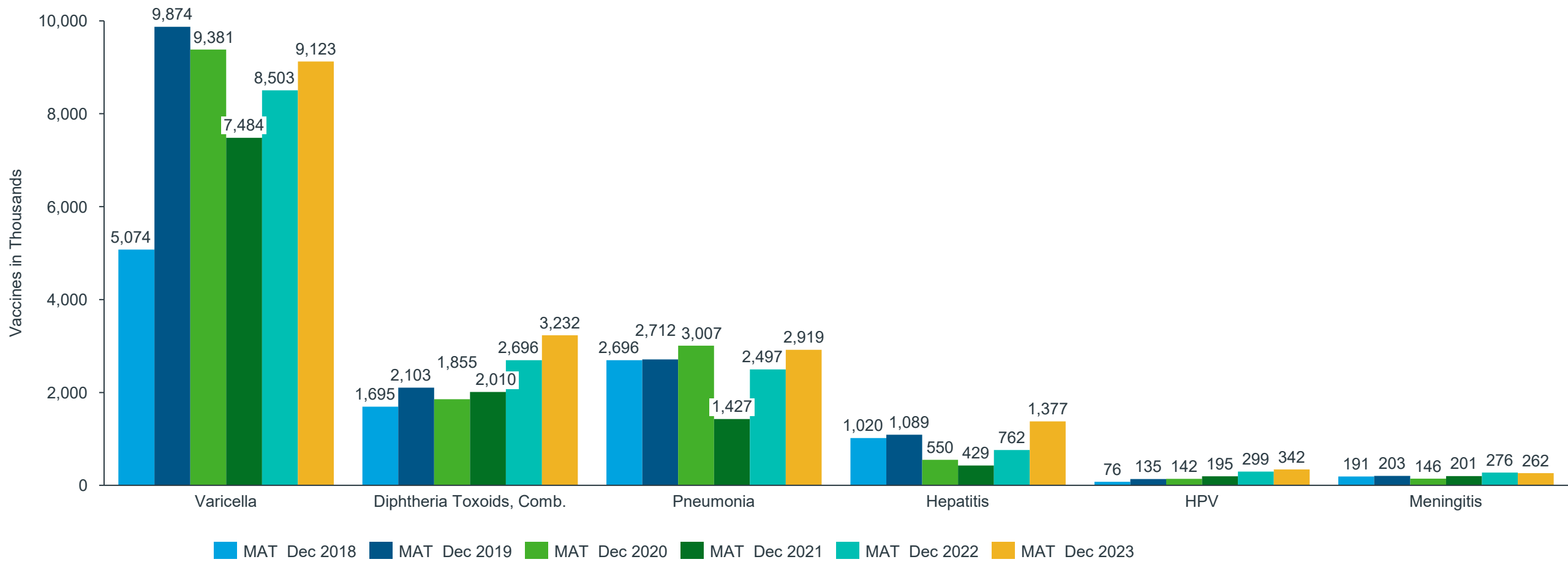


Data Source: <https://www.cdc.gov/flu/fluview/dashboard/vaccination-administered.html>



Data Source: IQVIA Xponent®

Varicella vaccinations at Retail are recovering but have yet to return to pre-COVID levels while others have recovered better

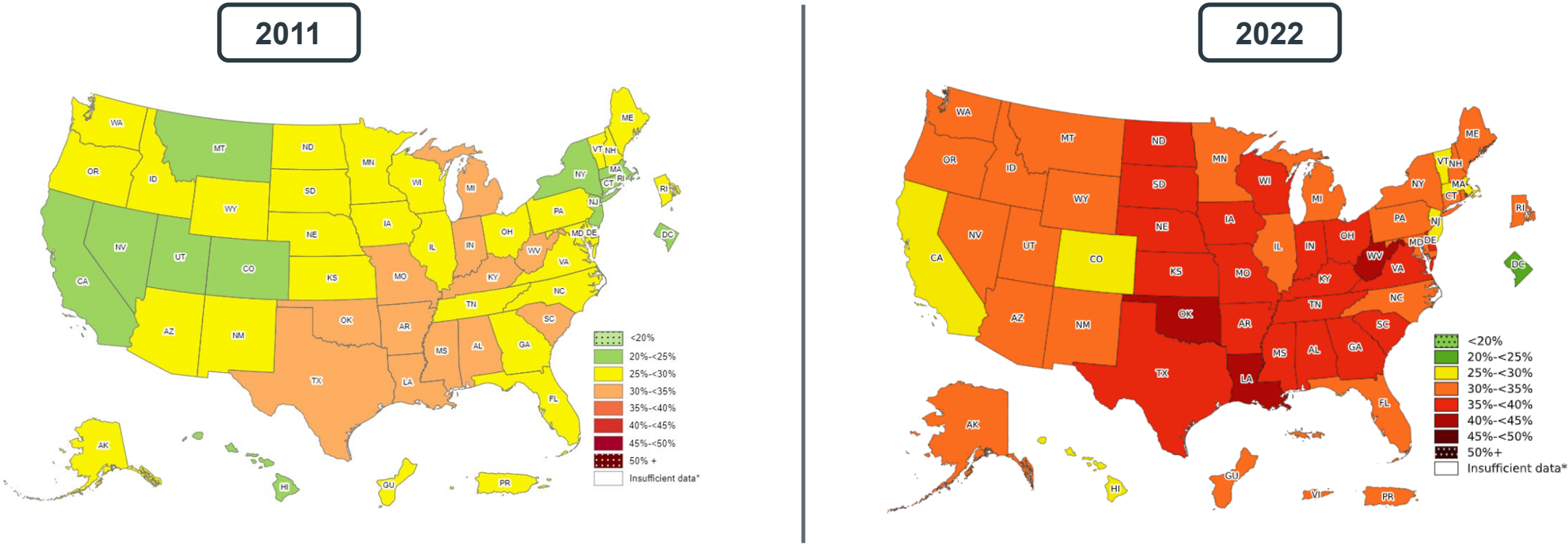


GLP-1s



Self-reported prevalence of obesity has increased significantly in a decade

Prevalence of Self-Reported Obesity Among U.S. Adults by State and Territory
from the Behavioral Risk Surveillance system (BRFSS)



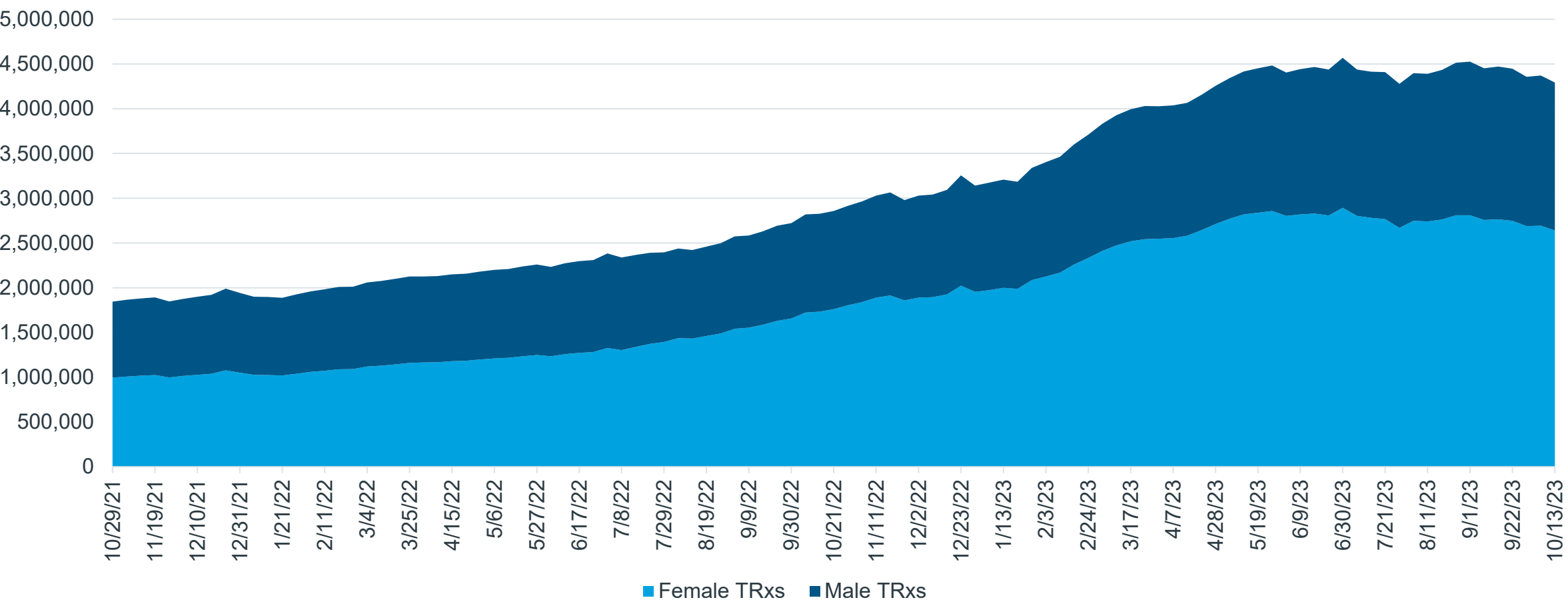
† Prevalence estimates reflect BRFSS methodological changes started in 2011. These estimates should not be compared to prevalence estimates before 2011.
*Sample size <50, the relative standard error (dividing the standard error by the prevalence) ≥30%, or no data in a specific year.

Source link: [Overweight & Obesity | CDC](#)



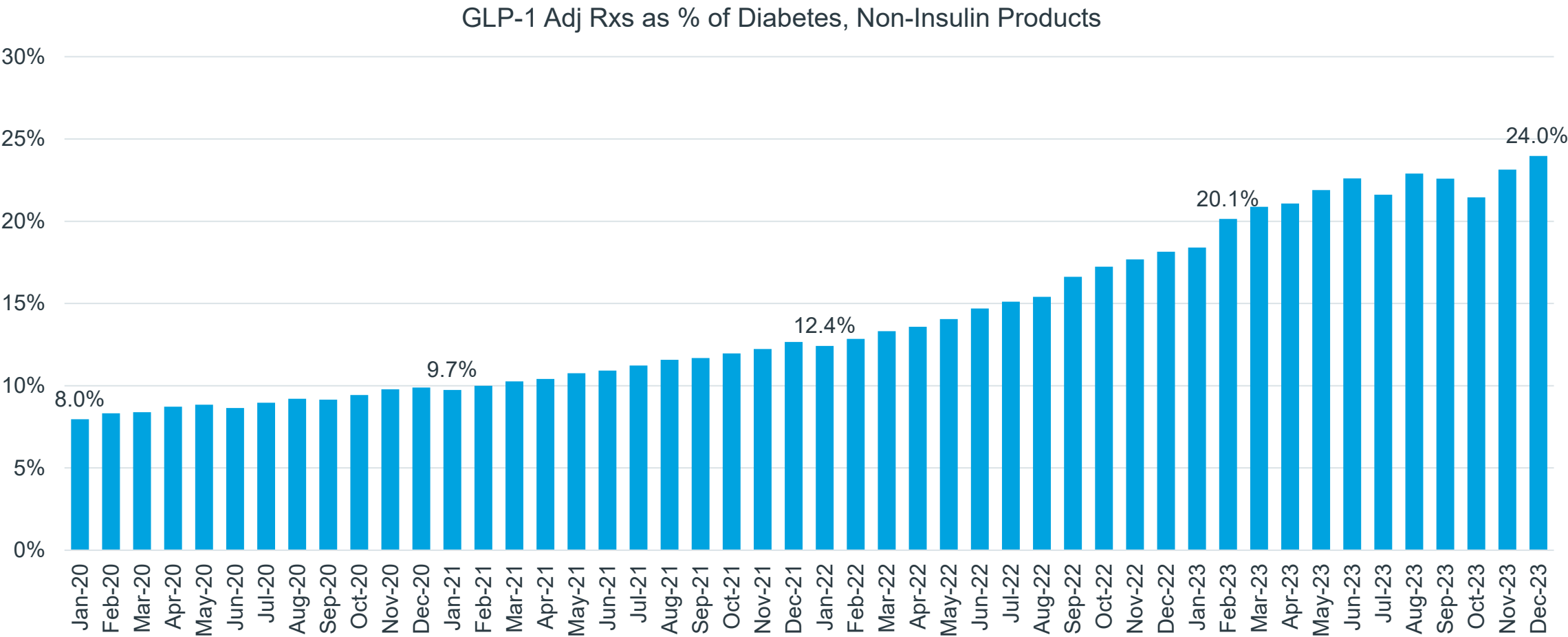
Recent adoption of GLP-1s has skewed to females and slowed primarily due to shortages

GLP-1 for Obesity or Diabetes TRx Volume by Gender



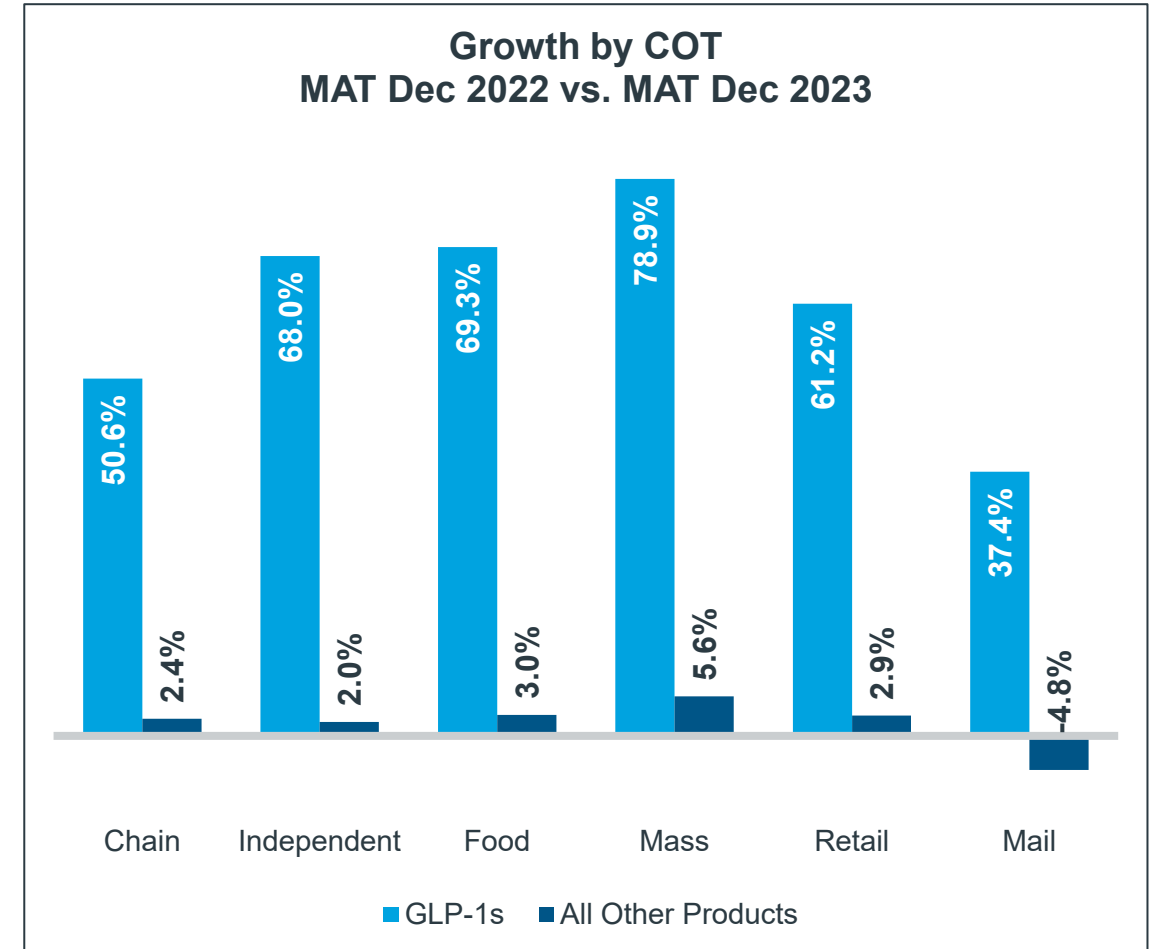
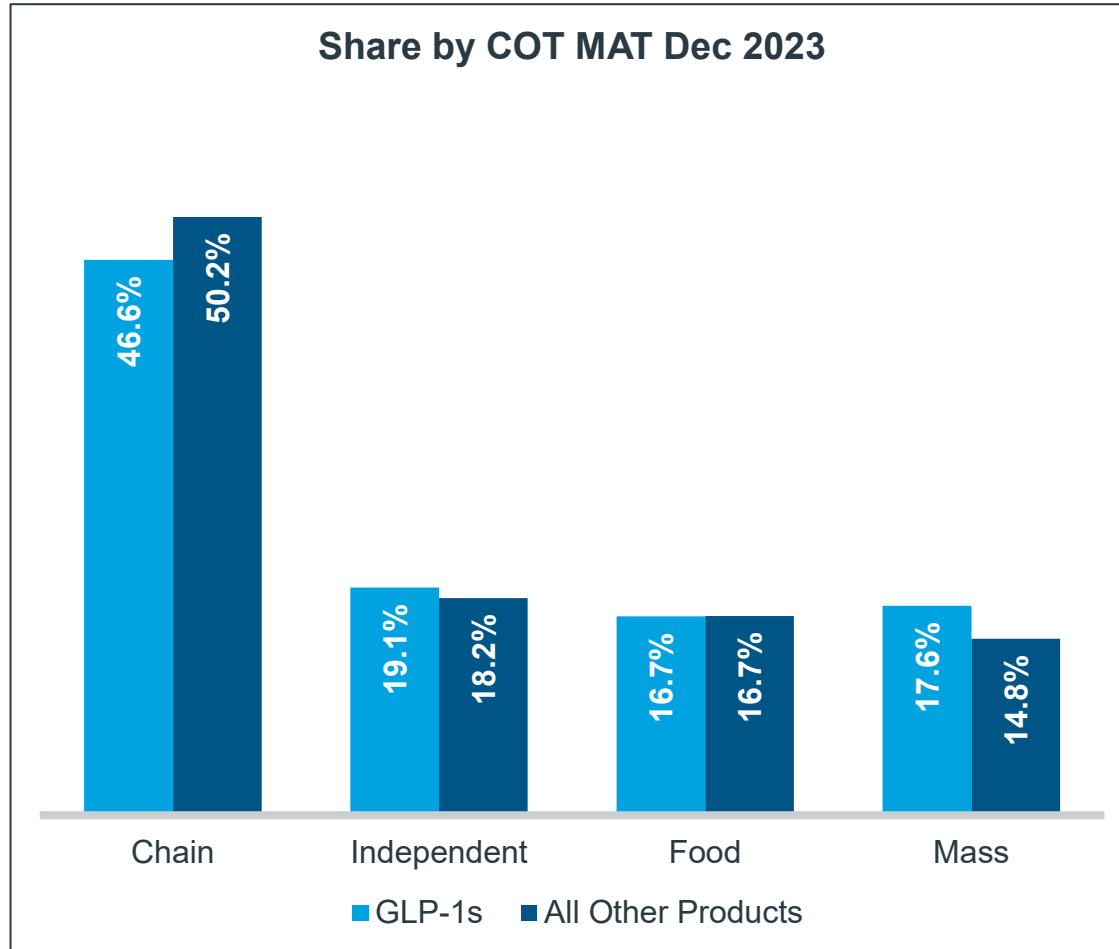
Source: IQVIA National Prescription Audit, Oct 2023

As a percent of non-insulin diabetes products, GLP-1 products are continuing to grow

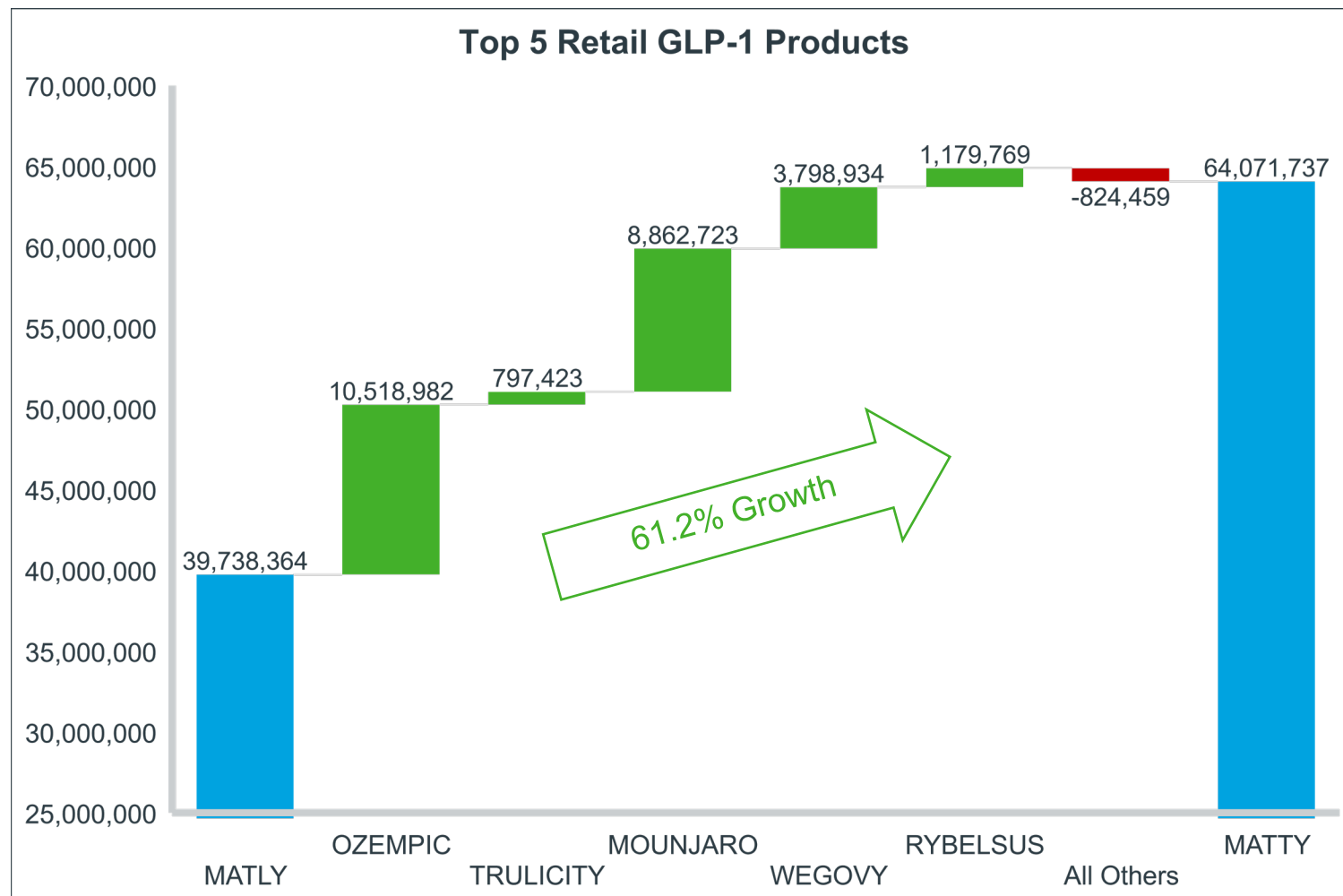


Data shown is the percent of GLP-1 diabetes products as a percent of total non-insulin diabetes products

Independents and Mass saw higher share with GLP-1s than All Other Products combined



Ozempic and Mounjaro* drove most of the volume growth among GLP-1s

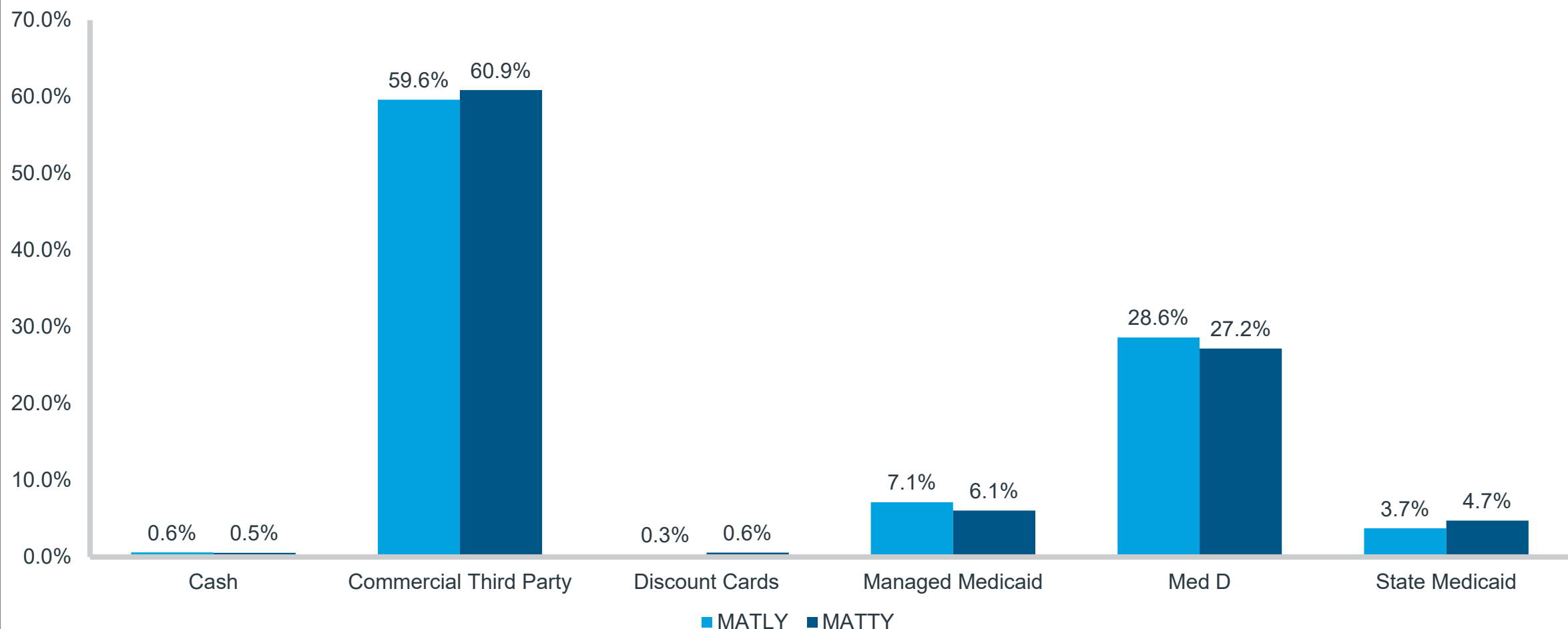


- The Retail sector grew 61.2%, over 24.3M adjusted prescriptions year over year
- All Others combined saw decline

Product	MATTY Adj. Rx's
OZEMPIC	14,491,052
TRULICITY	14,821,516
MOUNJARO	2,413,369
WEGOVY	920,648
RYBELSUS	2,794,394
All Others	4,297,386

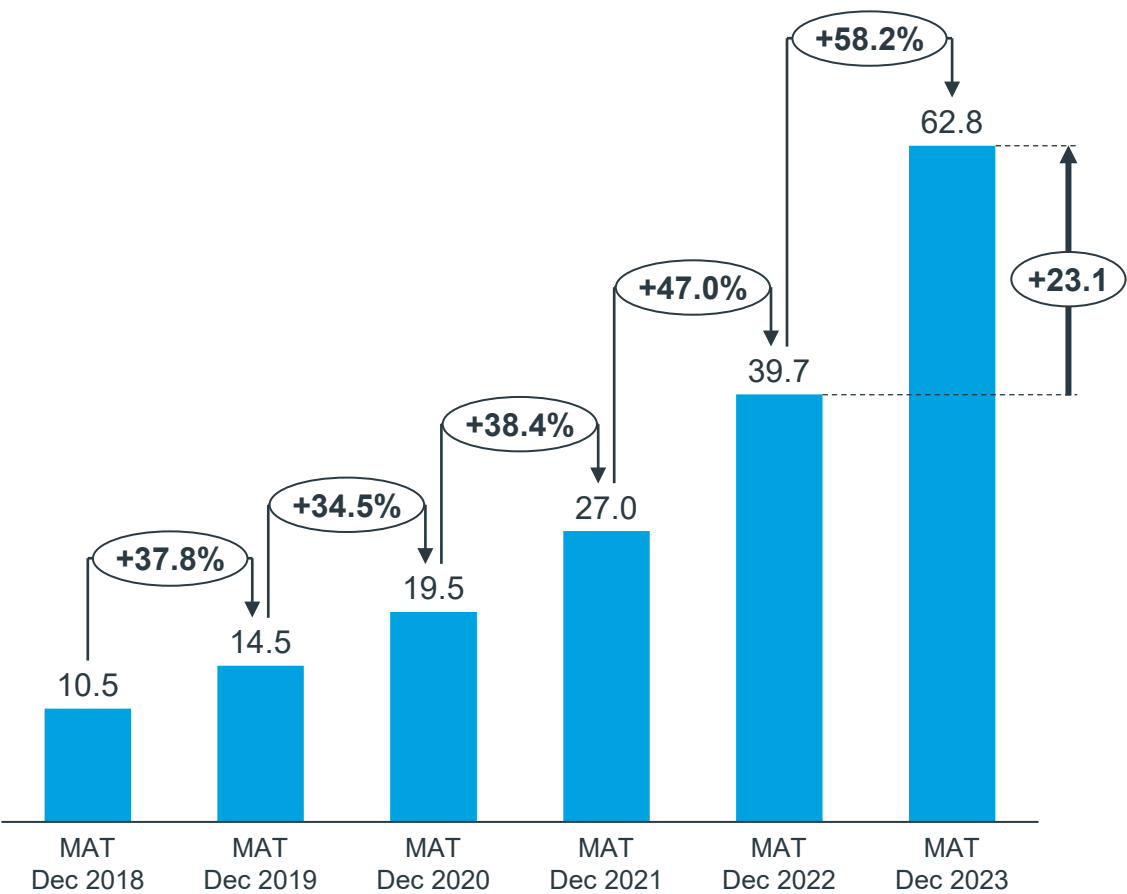
Cash, Managed Medicaid, and Med D saw a decline in share year over year

GLP-1 EMOP Share Change YoY – MAT Dec 2022 vs MAT Dec 2023



GLP-1s have grown ~58% over the last 12 months and ~84% of the sales are in Retail

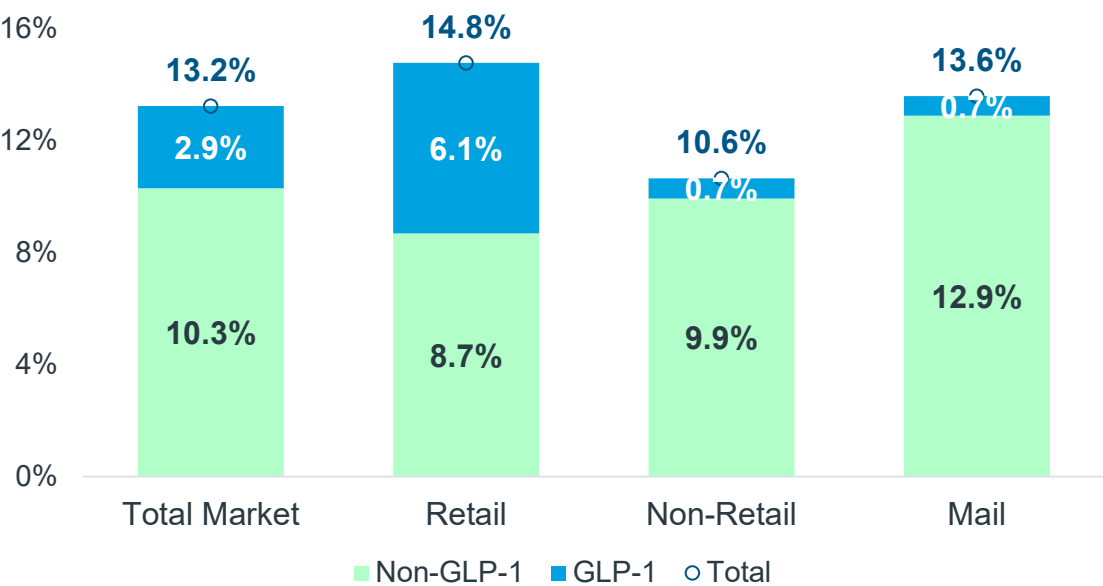
Moving Annual Total GLP-1 Sales Dollars (Billions)



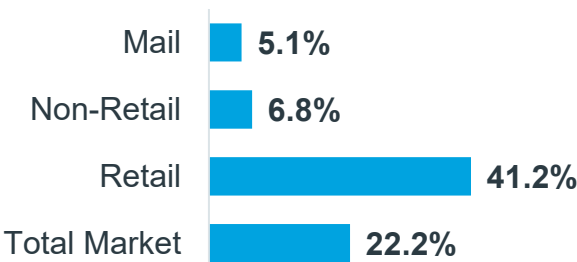
Note: In 2018 there was no Rybelsus, Wegovy or Mounjaro

Updated with December 2023 Data

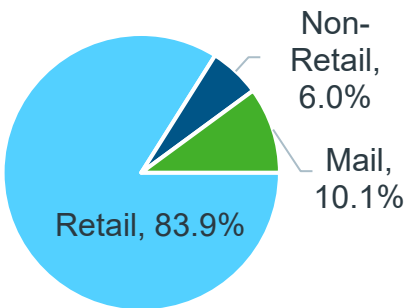
Moving Annual Total Sales Contribution to Growth



What % of sales growth are GLP-1s?

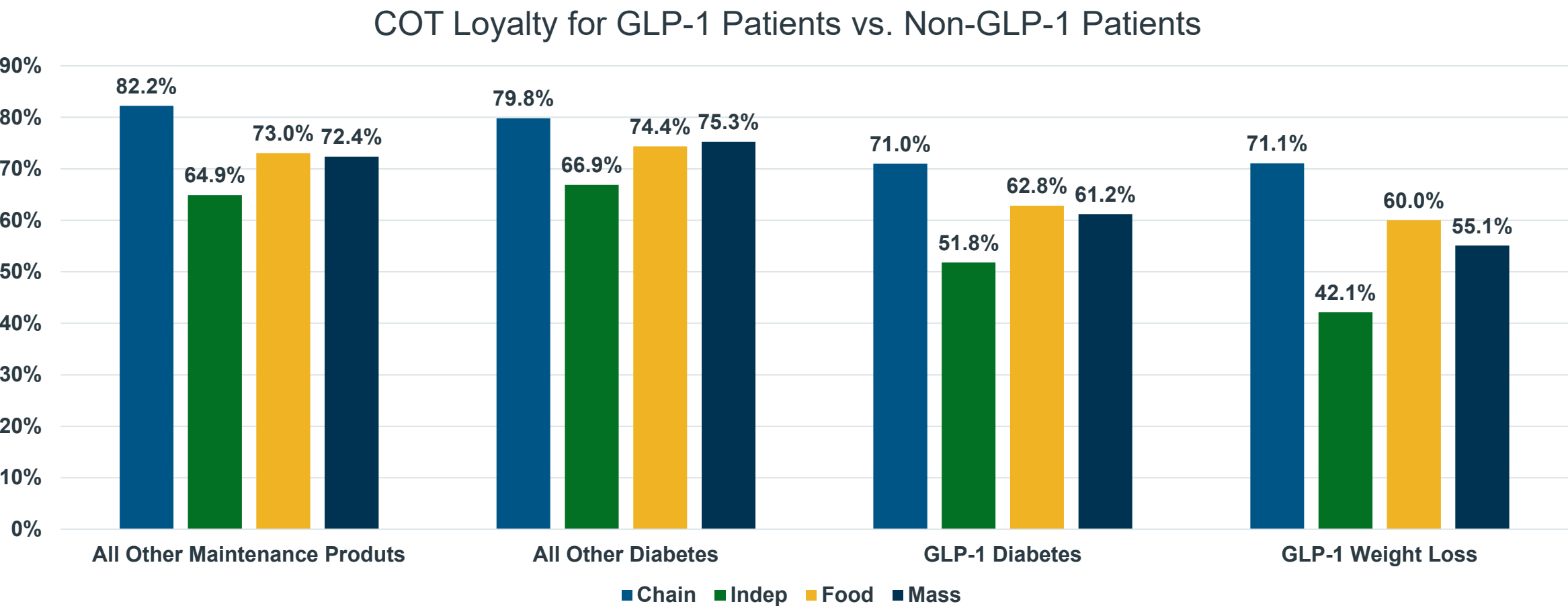


Where are the sales coming from?



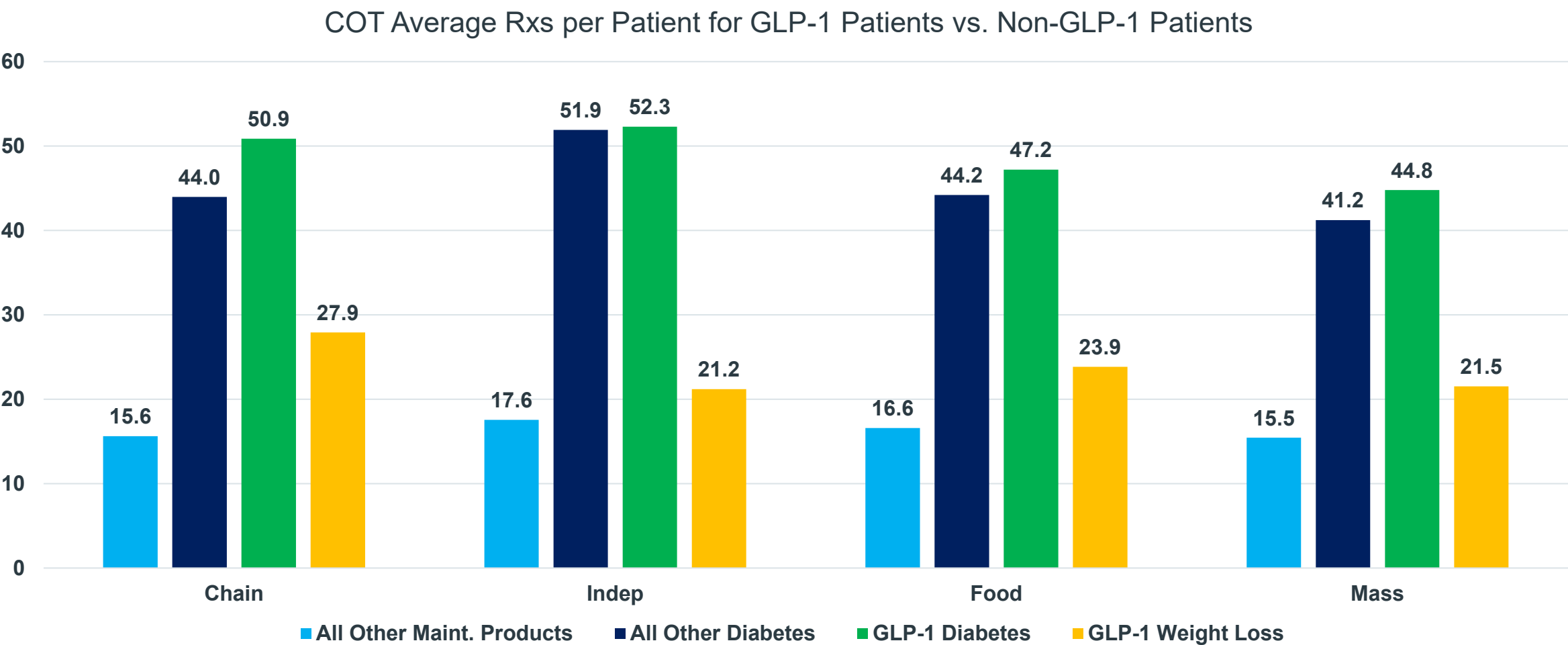
Overall, GLP-1 patients are least loyal

Chain has highest loyalty across the patient segments



IQVIA Patient Data, Maintenance Rx's Only, MAT Ending Oct 2023

GLP-1 Diabetes Rx's per patient are highest across all classes of trade followed closely by Other Diabetes

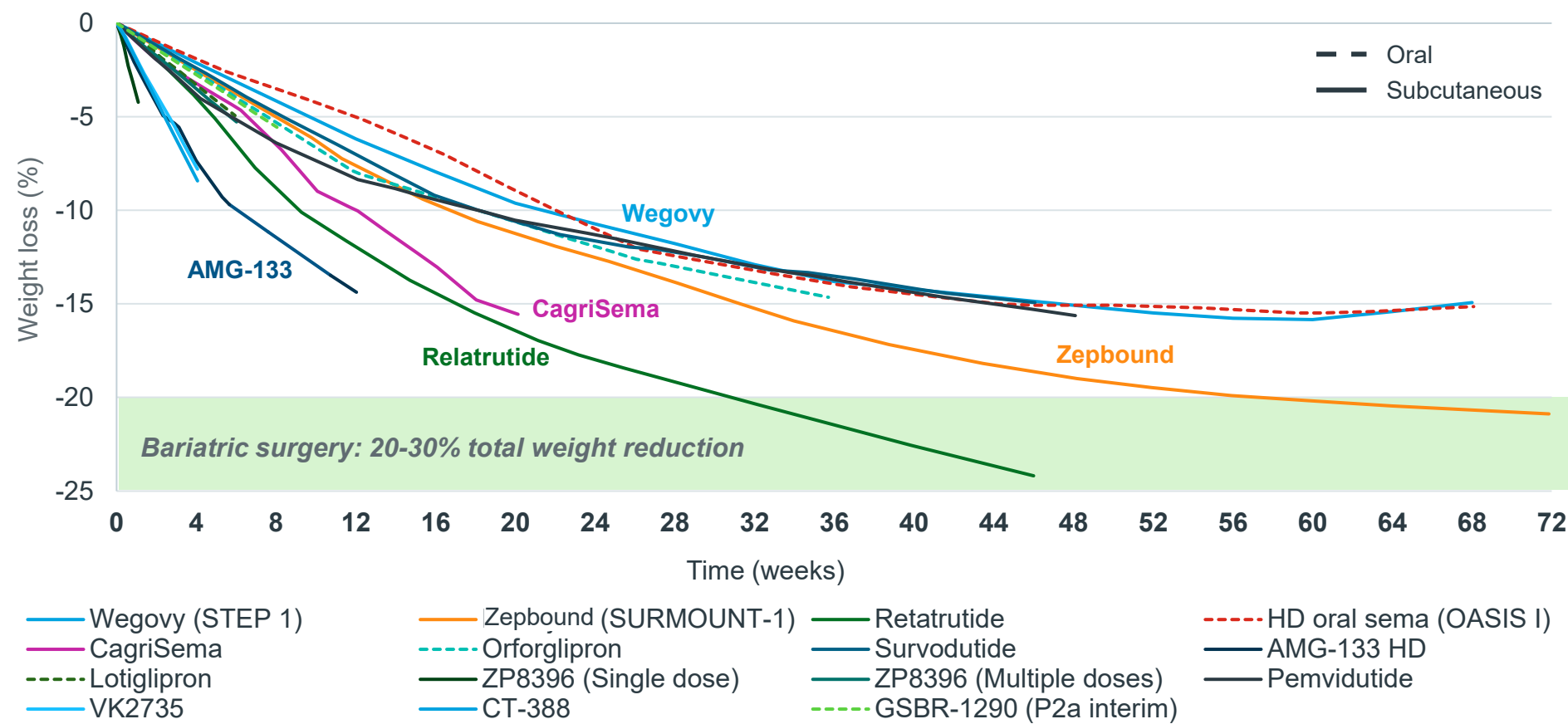


IQVIA Patient Data, Maintenance Rx's Only, MAT Ending Oct 2023

Next-generation obesity therapies are pushing the efficacy frontier

However, significant first-mover advantage for Novo, Lilly – parallels to PD-(L)-1 market?

Weight loss achieved by select anti-obesity therapeutics across phase 1-3 trials



- MoA combos approaching bariatric surgery levels
- How much weight loss is 'too much' (fat vs. lean)?
- Finding differentiation: H2H data, CVOTs, RWE, 'quality', other benefits

There are two main strategies playing out in obesity

Portfolio play has advantages for late-comers, offering more angles for differentiation

1 Monotherapy: opportunities for differentiation



Improved safety,
tolerability, adherence



Improved quality of
weight loss



Best-in-class %
weight loss



Oral medicines for
chronic management

Examples: Pfizer, (Versanis, now part of Lilly), most EBP's

2 Portfolio play: obesity backbone plus cv-met assets



Obesity associated with many health challenges and comorbidities, eg T2D, CVD, NASH, CKD



True value of many (late-comer) obesity assets lies in portfolio play across the CV-met continuum, with obesity therapies becoming backbone agents



Owning backbone assets gives development flexibility – novel combinations not dependent on 3rd party agents

Examples: AZ, BI, Roche; incumbents Novo, Lilly

Two co-existing obesity markets, with distinct drivers

Risk of reinforcing health inequity?



Medical-led, reimbursed

- Focus on most **severe obese** patients, with other **co-morbidities**, at **high risk**
- **Payer controls**, eg tiered access, limited duration, setting of care, pre-authorisation
- Health systems looking for **cost-offsets**, in addition to **clinical outcomes**

alongside...



Consumer-led, out-of-pocket

- **Motivated consumers** pursuing weight loss as lifestyle goal
- **Willingness to pay** a key market driver; may lead to consumer price > medical
- Consumers' **primary focus: weight loss** achieved in R-W; CV-risk secondary

Increasing scrutiny of safety, as GLP-1 based therapies are being used in larger patient populations

More long-term safety data needed from use in routine medical practice



Medicines & Healthcare products
Regulatory Agency



Safety risks being investigated by regulators

- Suicidal behaviour and ideation*
- Suicidal behaviour and ideation*
- Alopecia
- Aspiration

Other reported adverse events (AEs) (not exhaustive)

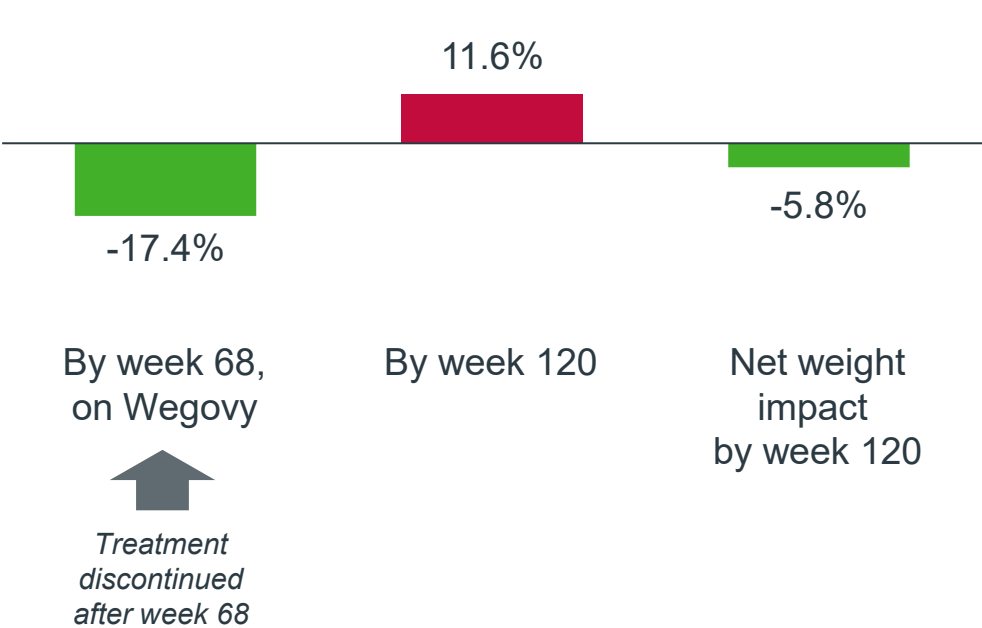
- Gastrointestinal, incl. nausea, diarrhoea, vomiting, constipation, abdominal pain, flatulence, ileus
- Headache
- Fatigue
- Dizziness
- Increased heart rate
- Depression
-

* A recent US study found no link between Wegovy, Ozempic and increase in suicidal thoughts

The need to keep treating...

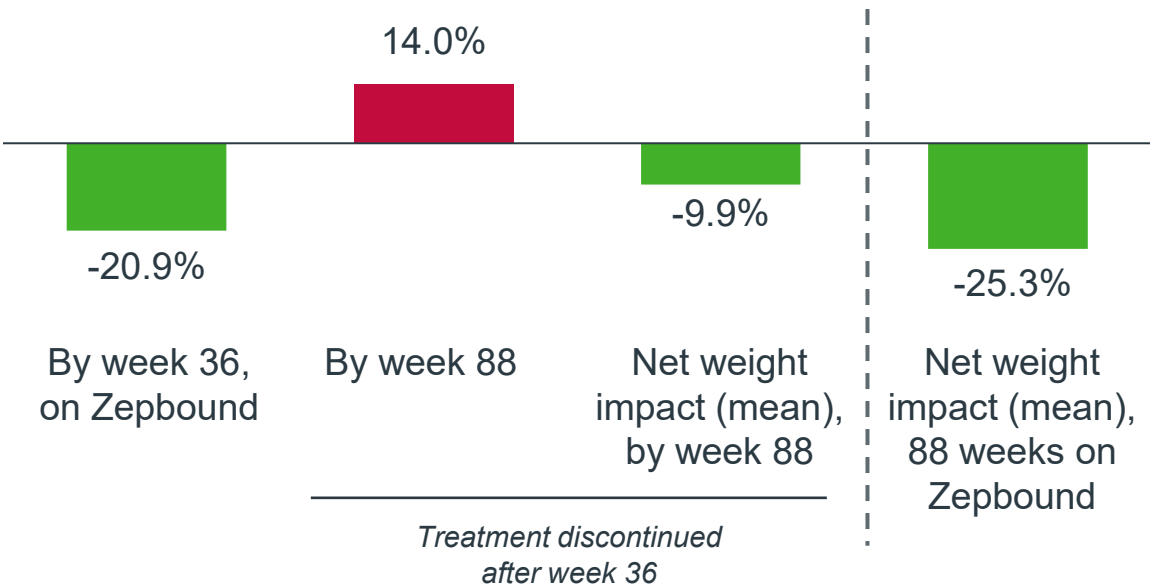
Benefits reverse after treatment with Wegovy, Zepbound was discontinued

Novo: STEP 1 (Wegovy) extension ph3 trial
(weight change over time after discontinuation)



Cardiometabolic improvements seen at week 68 reverted towards baseline at week 120 for most variables

Lilly: SURMOUNT-4 (Zepbound) ph3 trial
(weight change over time with/without discontinuation)



Much of the initial improvement in cardiometabolic risk factors had been reversed 52 weeks after discontinuation



Digital health players are taking note, seeking partnerships




DIRECT-TO-CONSUMER

WeightWatchers

Bloomberg March 2023

WeightWatchers Doesn't Want to Get Netflixed by Ozempic

The WW deal for telehealth provider Sequence underscores the seismic shift in obesity management.



DIRECT-TO-CONSUMER

Bloomberg May 2023

A Weight Loss Startup Touting Mindfulness, Noom Is Now Prescribing Drugs

- Startup pitches combination of medication and lifestyle change
- WeightWatchers and others rivals also offer drugs like Wegovy



HEALTH PLAN-FOCUS (B2B)

We've Lived with Obesity. Now, We're Providing the Care We Wish We Had.

Ilant offers a comprehensive solution that takes the stress and stigma out of obesity treatment. We improve outcomes while reducing costs for employers and health plans through value-based care.



Get prescription weight loss medication online

DIRECT-TO-CONSUMER




On-demand provider coaching and support


Improves the way your body responds to sugars

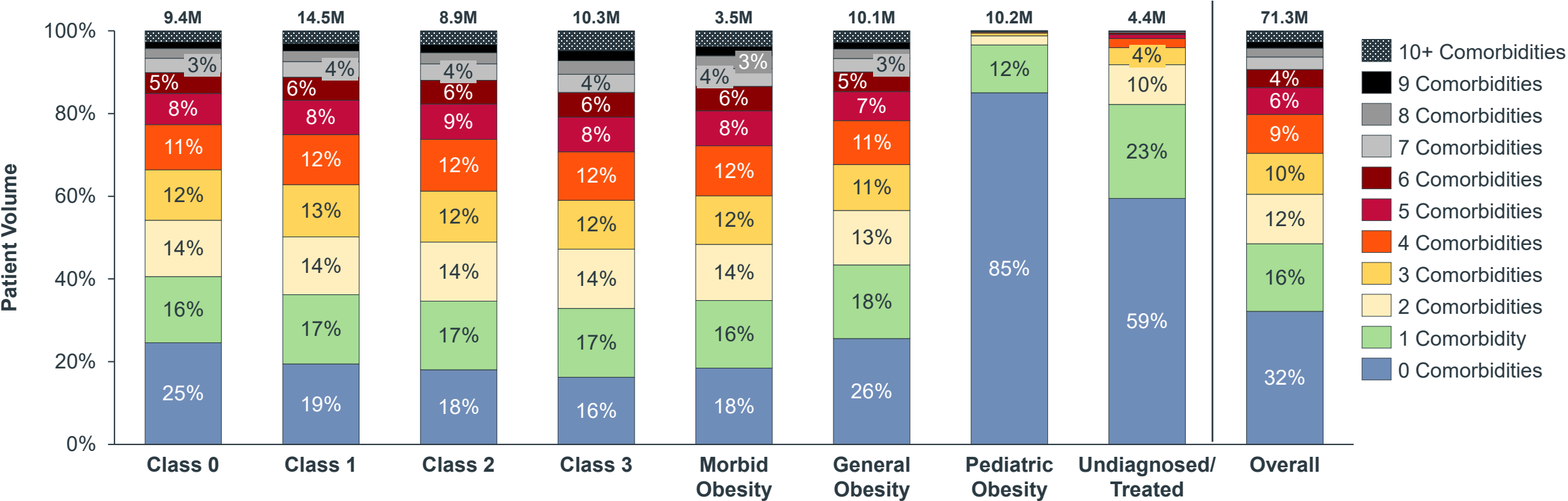

Helps you feel full faster, longer

Number of comorbidities increases with the severity of obesity

Obesity patients across all cohorts have on average 2.5 comorbidities

Obesity Patient Distribution by # of Comorbidities of Interest and Obesity Class

(Obesity-Diagnosed Patients; 2022/2023 Data Active Patients; Jan 2018 – June 2023)



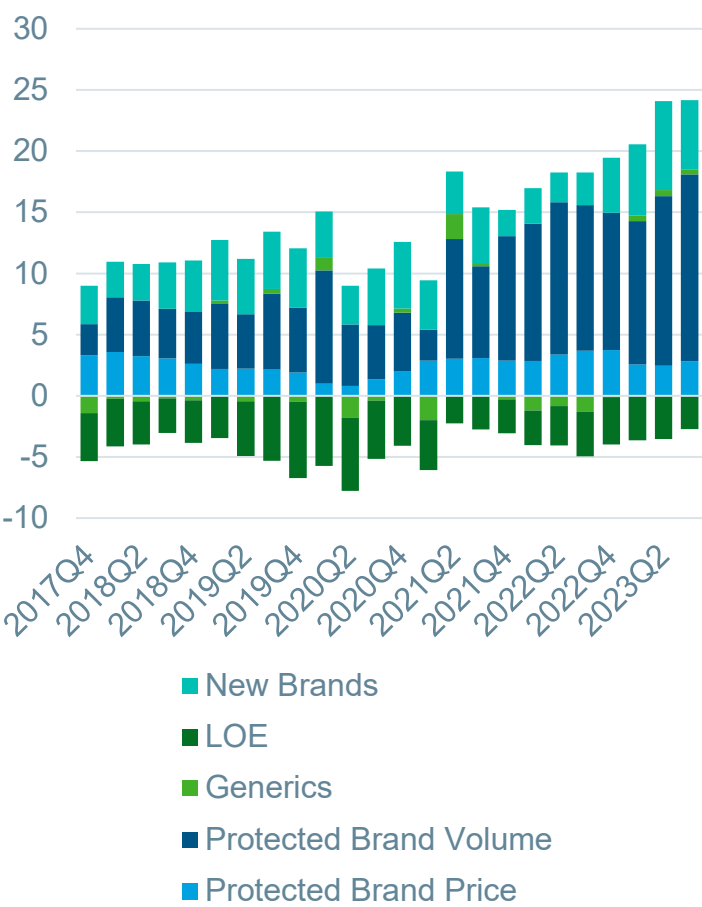
BMI Range	BMI 27 – 29.9	BMI 30 – 34.9	BMI 35 – 39.9	BMI 40 +	N/A	N/A	N/A	N/A	N/A
Avg. # CMBs	2.8	3.0	3.1	3.4	3.2	2.7	0.2	0.7	2.5

Outlook



US invoice-level growth has accelerated, driven by established brand volume not solely limited to GLP-1s

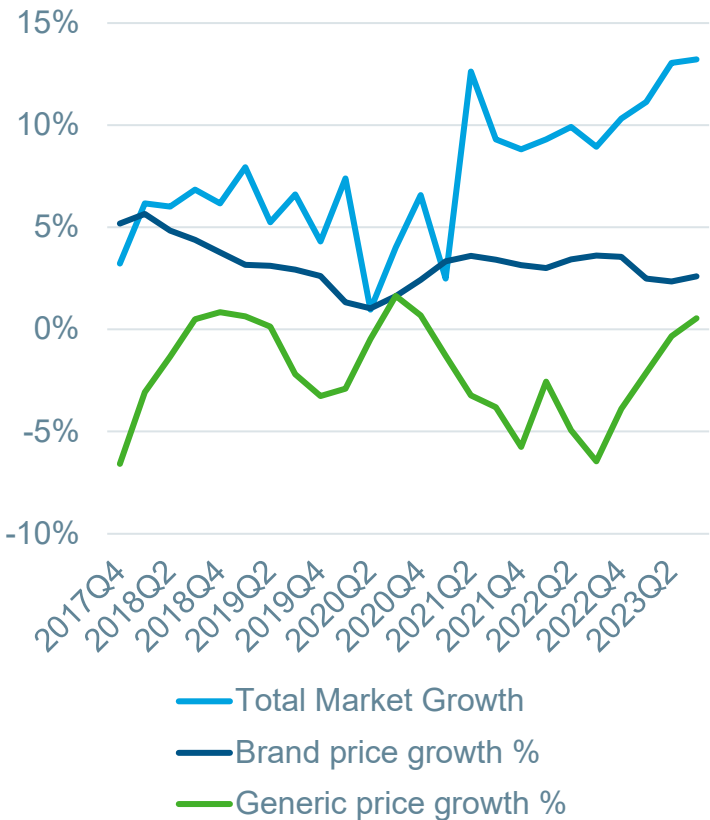
US Absolute Growth by Segment, US\$Bn (Invoice)



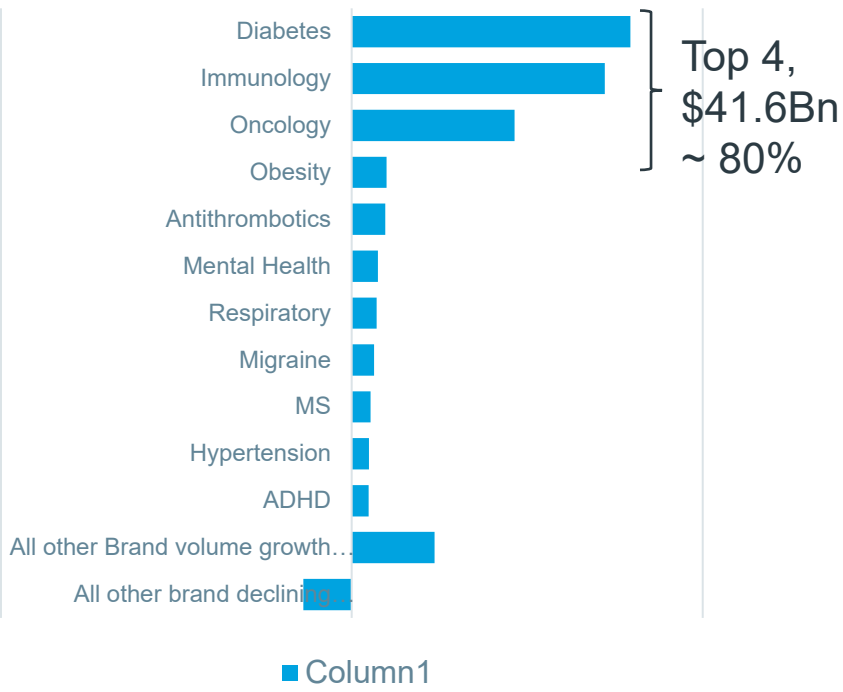
Source: IQVIA National Sales Perspectives, Sep 2023

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Selected Growth Rates

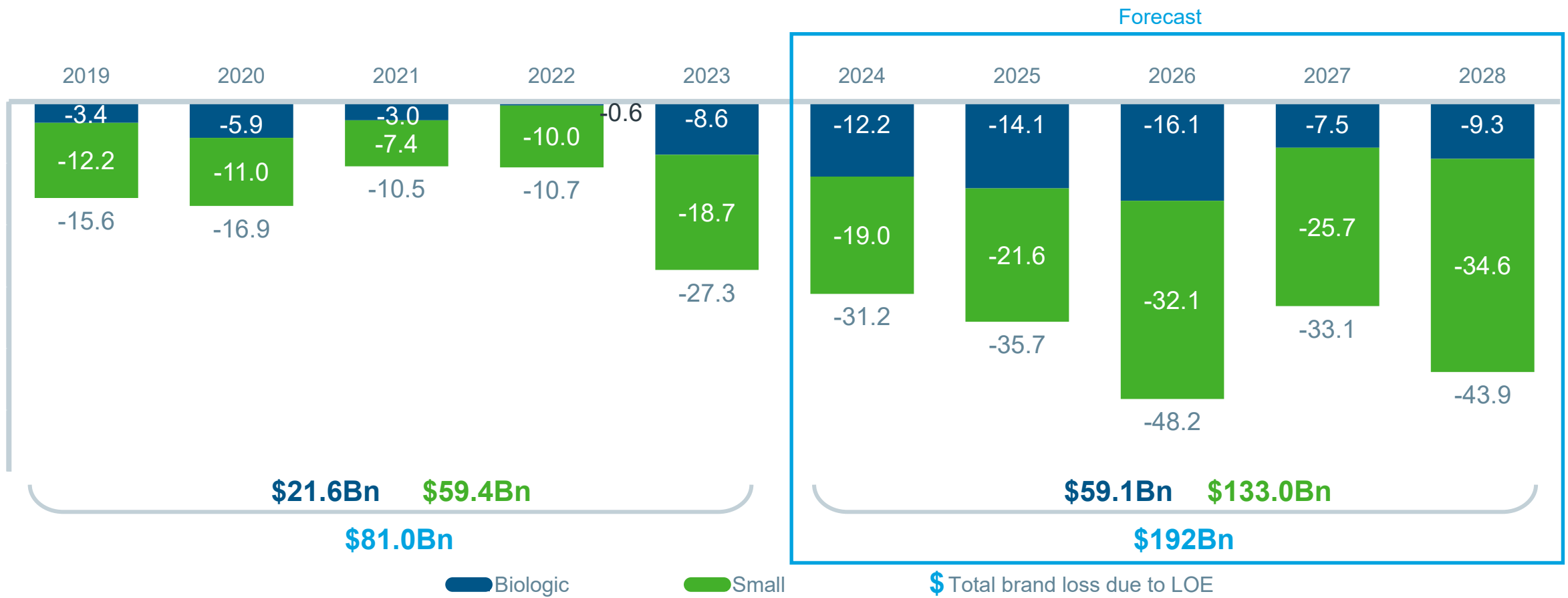


Brand Volume Growth MAT Q3 2023: \$52.6 Billion



The impact of exclusivity losses will reach \$192Bn over the next 5 years, with around 30% due to the availability of biosimilars

10 developed countries impact of brand losses of exclusivity 2019–2028, US\$Bn



Source: IQVIA Market Prognosis, Sep 2023; IQVIA Institute, Nov 2023.
Global Use of Medicines 2024: Outlook to 2028. Report by the IQVIA Institute for Human Data Science.

Leading LOEs primarily in Oncology, Immunology, Neurology; Some are also affected by MFP negotiation, complicating outlook

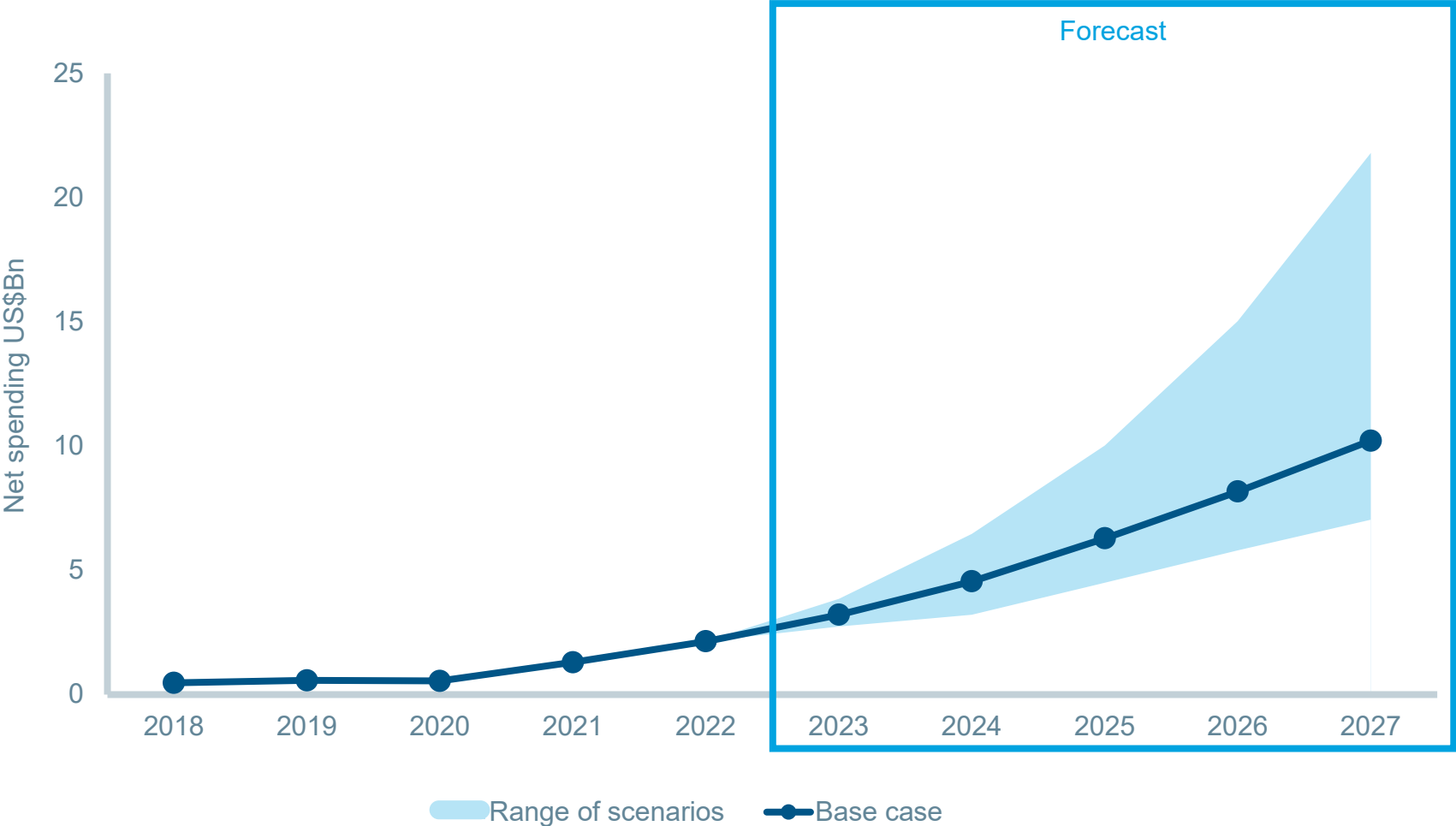
Most impactful Brand LOEs by year of impact

2023	2024	2025	2026	2027	2028
Humira (1/23)	Humira (1/23)	Xarelto (2/25)	Farxiga (10/25)	Januvia (5/26)	Eliquis (4/28)
Latuda (2/23)	Vyvanse (8/23)	Stelara (1/25)	Stelara (1/25)	Ibrance (3/27)	Trulicity (12/27)
Vyvanse (8/23)	Myrbetriq (11/23)	Humira (1/23)	Januvia (5/26)	Sprycel (9/26)	Otezla (3/28)
Gilenya (9/22)	Spiriva (12/23)	Farxiga (10/25)	Xarelto (2/25)	Entyvio (1/26)	Ibrance (3/27)
Revlimid (3/22)	Aubagio (3/23)	Cabometyx (9/24)	Xeljanz (12/25)	Stelara (1/25)	Xtandi (8/27)

Source: IQVIA Market Prognosis, Sep 2023; IQVIA Institute, Nov 2023.
Preliminary Analysis not yet published

Spending on obesity drugs has accelerated in the past two years from novel GLP-1 agonists with upside if more widely reimbursed

Obesity spending at estimated manufacturer net prices, US\$Bn



2023–2027 Key metrics

**+378% total net spending growth
+\$8.1Bn
(35–38% CAGR)**

2–5 new launches, primarily GLP-1 and GLP-1/GIP combo

Further growth upside potential offset by significant off-invoice discounts and rebates

Source: IQVIA Institute, Mar 2023.
The Use of Medicines in the U.S. 2023: Usage and Spending Trends and Outlook to 2027. Report by the IQVIA Institute for Human Data Science.
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The role of the pharmacist continues to expand

Pharmacy Services Overview

Information provided by NACDS, January 5, 2024



Tobacco Cessation Services

20 states authorize Pharmacists to initiate tobacco cessation therapies, including nicotine-replacement products and/or FDA- approved cessation aids

Test & Initiation of Treatment Services

20 states allow Pharmacists to provide appropriate treatment to patients based on results of point-of-care tests for common conditions including flu and strep throat via statewide protocols and collaborative practice agreements

Naloxone Services

50 states allow Pharmacists to furnish and dispense naloxone within all, via varying forms of authority

Hormonal Contraception Services

21 states recognize Pharmacists' ability to independently initiate and dispense contraceptives

HIV Prevention Services

13 states authorize Pharmacists to initiate HIV prevention therapies (pre-exposure and/or post-exposure prophylaxis)

Tuberculosis (TB) Testing

4 states allow Pharmacists to conduct TB testing without a collaborative practice agreement

Pharmacy Immunization Authority

Pharmacists in all

50 states can provide vaccines, to some degree, pursuant to state-specific laws and regulations

To date,

7 states recognize or have recently updated laws to fully align with the scope of authority of the Public Readiness and Emergency Preparedness Act (PREP Act)

Wrapping it up

1 The number of Retail pharmacies continues to decline

2 Med D prescriptions are driving growth in retail

3 Cough, Cold and Flu Season has been mild, and the RSV Vaccines are new and were not big this season

4 Specialty is now 51% of the total market sales but GLP1s (non specialty) growth is spectacular

5 Unbranded generics are growing on prescriptions but now have modest growth on Dollars

6 Elective procedures are still weak and screenings even weaker

7 The Pharmaceutical benefit Biosimilar wave is upon us with Humira now facing many competitors

8 There are plenty of LOE opportunities going forward both in Small molecules and Biologics

9 There are many Biologics that will not have any biosimilar competition

10 Drug shortages continue to be a real issue and could get worse

11 Non-retail and particularly hospitals and LTC bore the brunt of COVID

12 Opioid usage is back to 2000 levels

U.S Progress Point

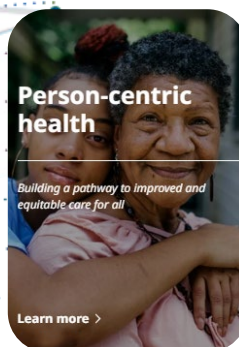
<https://www.iqvia.com/progresspoint>

*A curation of **IQVIA's best thinking** on **topics** and **trends** driving change, disruption, and **progress** in the United States healthcare market.*



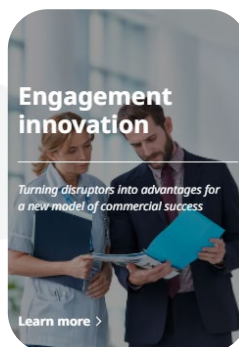
Market insights

- The IQVIA U.S. Launch Quarterly
- The IQVIA Monthly Launch Tracker
- Pharmaceutical Market and MedTech Trends
- Next Generation Payor Segmentation



Person-centric health

- Impact of Medicare Part D Cost Sharing
- Health Equity in the Time of COVID-19
- Advancing Outcomes with Home Healthcare



Engagement innovation

- HCP Consent at Scale
- Hidden Peer-to-Peer Learning Communities
- Importance of End-to-End Data in Physician Marketing

Presentations like this could not be completed without the help of many teams across the IQVIA organization



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Disclaimer slide



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Appendix



IQVIA Definition of a Specialty Drug

Specialty drugs at IQVIA are classified as products that meet the following criteria



Treats chronic, rare and/or complex diseases



Expensive (USD \$6K annual cost of therapy)



Initiated and maintained by a specialist



Unique distribution



Generally injectable and/or not self-administered



Requires extensive or in-depth monitoring/patient counseling



Products that require an additional level of care in their chain of custody



Requires reimbursement assistance

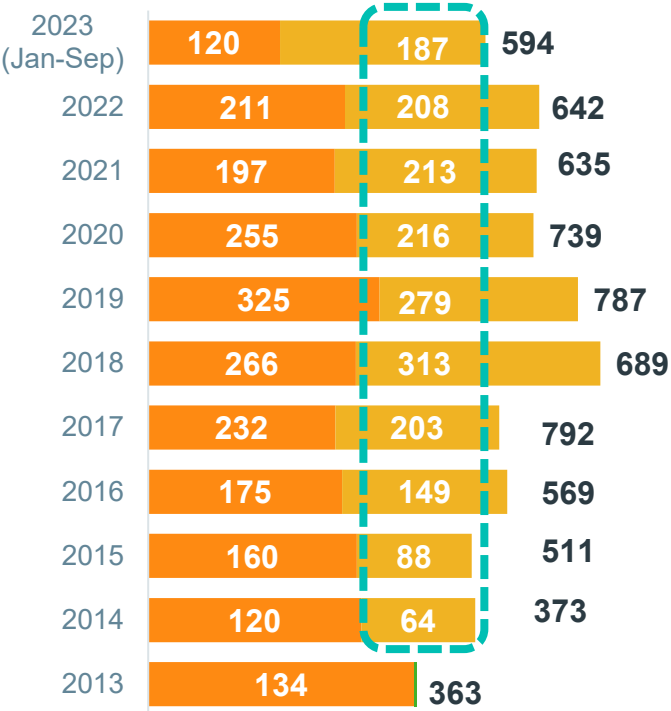


GLP-1 Product List

- + Adlyxin
- + Bydureon
- + Bydureon BCISE
- + Bydureon Pen
- + Byetta
- + Mounjaro
- + Ozempic
- + Rybelsus
- + Saxenda
- + Trulicity
- + Victoza 2-Pak
- + Victoza 3-Pak
- + Wegovy
- + Zepbound

Not all approved ANDAs are launched in the same timeframe, ~30% ANDAs are launched in same period

Total ANDA Approvals and Launches



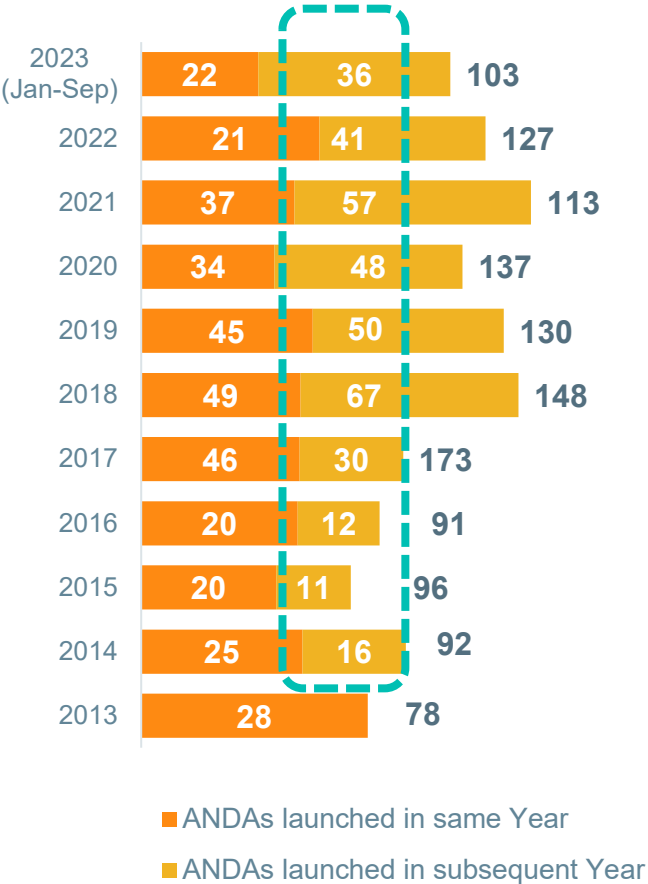
■ ANDAs launched in same Year
 ■ ANDAs launched in subsequent Year
 Total Approved ANDAs

Approval Year	Total Approvals	Same Year Launches	Subsequent year Launches →										2023 (Jan-Sep)	Total launches	% launched
			2014	2015	2016	2017	2018	2019	2020	2021	2022				
2023	594	120											120	20%	
2022	642	211										124	335	52%	
2021	635	197									128	32	357	56%	
2020	739	255								146	43	8	452	61%	
2019	787	325							161	36	15	13	551	70%	
2018	689	266						180	27	11	7	2	493	72%	
2017	792	232					207	53	17	14	10	4	537	68%	
2016	569	175				127	62	21	6	3	2	3	399	70%	
2015	511	160			107	39	26	9	4	1	1	0	347	68%	
2014	373	120		61	28	21	13	9	0	2	2	0	256	69%	
2013	363	134	64	27	14	16	5	7	1	0	0	0	268	74%	
Total	6,694	2,195	64	88	149	203	313	279	216	213	208	187	4,115	61%	

Not all approved ANDAs are launched in the same timeframe, ~30% ANDAs are launched in same period

INJECTABLES

Total ANDA Approvals and Launches

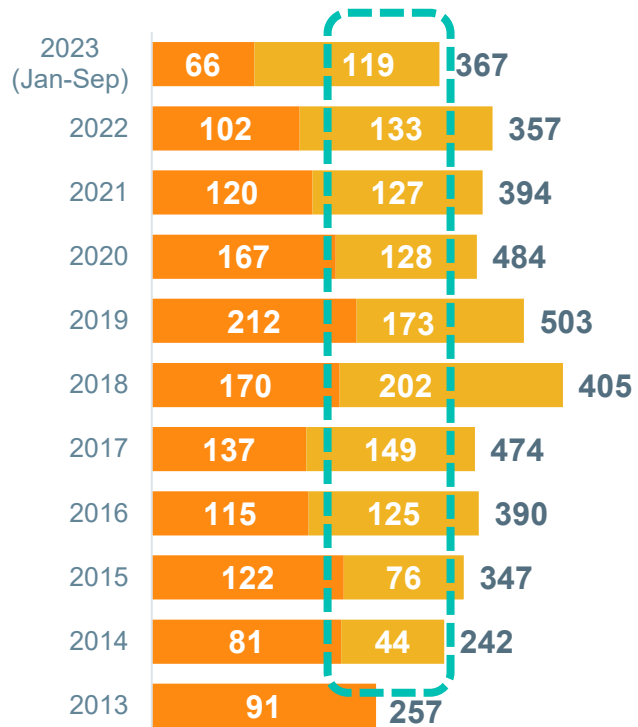


Approval Year	Total Approvals	Same Year Launches	Subsequent year Launches →										2023 (Jan-Sep)	Total launches	% launched
			2014	2015	2016	2017	2018	2019	2020	2021	2022				
2023 (Jan-Sep)	103	22											22	21%	
2022	127	44										25	69	54%	
2021	113	37									25	6	68	60%	
2020	137	34								41	11	1	87	64%	
2019	130	45							31	8	0	3	87	67%	
2018	148	49						33	12	1	3	0	98	66%	
2017	173	46					52	8	2	6	1	0	115	66%	
2016	91	23				19	7	4	1	1	0	1	56	62%	
2015	96	20			9	4	5	2	2	0	0	0	42	44%	
2014	92	25		8	3	2	2	2	0	0	1	0	43	47%	
2013	78	28	16	3	0	5	1	1	0	0	0	0	54	69%	
Total	1,288	373	16	11	12	30	67	50	48	57	41	36	741	58%	

Not all approved ANDAs are launched in the same timeframe, only 32% ANDAs are launched in same period

ORALS

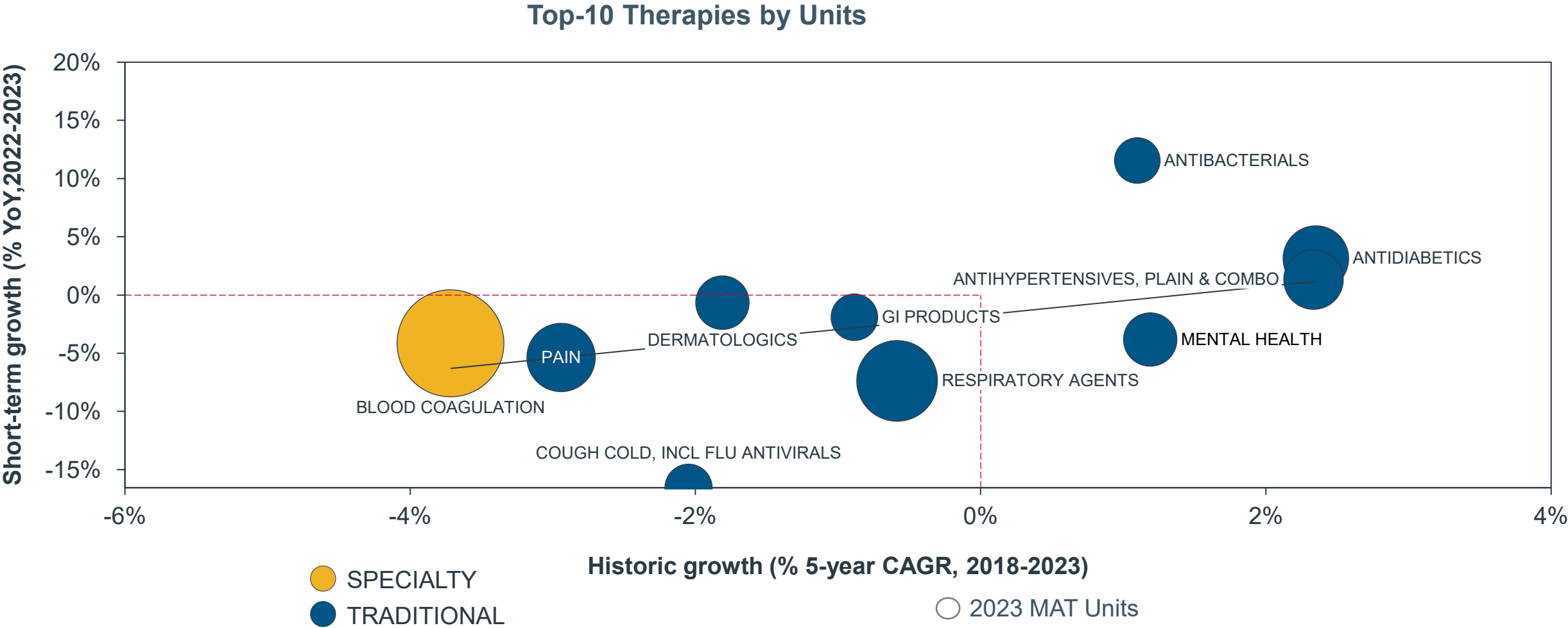
Total ANDA Approvals and Launches



■ ANDAs launched in same Year
■ ANDAs launched in subsequent Year
 Total Approved ANDAs

Approval Year	Total Approvals	Same Year Launches	Subsequent year Launches →									2023 (Jan-Sep)	Total launches	% launched
			2014	2015	2016	2017	2018	2019	2020	2021	2022			
2023 (Jan-Sep)	367	66											66	18%
2022	357	102										71	173	48%
2021	394	120									80	22	222	56%
2020	484	167								86	28	7	288	60%
2019	503	212							99	22	12	11	356	71%
2018	405	170						107	11	8	2	2	300	74%
2017	474	137					128	34	12	7	7	4	329	69%
2016	390	115				95	45	15	3	2	2	2	279	72%
2015	347	122			87	27	17	4	2	1	1		261	75%
2014	242	81		53	24	16	8	7		1	1		191	79%
2013	257	91	44	23	14	11	4	6	1				194	75%
Total	4,220	1,383	44	76	125	149	202	173	128	127	133	119	2,659	63%

On a Units basis, Antibacterials leads short-term growth and Antidiabetics leads long-term growth



Immunology and Humira top Specialty Mail sales

Top 10 Specialty Mail Therapies and Products - MAT December 2023 (Sales \$ Billions)

Therapies			
Rank	Therapy	MAT Dec 2023	YoY Growth
1	IMMUNOLOGY	172.8	14.2%
2	ONCOLOGICS	97.8	20.2%
3	MULTIPLE SCLEROSIS	27.9	13.5%
4	HIV ANTIVIRALS	8.2	-17.3%
5	ALL OTHER RESPIRATORY	6.0	9.3%
6	RESPIRATORY AGENTS	4.4	-2.7%
7	OTHER CARDIOVASCULARS	3.5	21.0%
8	BLOOD COAGULATION	3.1	26.2%
9	GROWTH HORMONES	2.6	8.7%
10	OTHER CNS	2.4	-1.4%

Products			
Rank	Product	MAT Dec 2023	YoY Growth
1	HUMIRA	28.4	9.5%
2	STELARA	12.8	15.5%
3	DUPIXENT	9.6	43.2%
4	SKYRIZI	8.4	104.7%
5	ENBREL	7.8	7.6%
6	TALTZ	4.8	14.5%
7	TREMFYA	4.4	17.8%
8	RINVOQ	3.6	136.9%
9	COSENTYX 2 PEN	3.6	2.3%
10	OTEZLA	3.2	5.5%

Skyrizi is the fastest growing sales product in Specialty Mail

Top 10 Specialty Mail Therapies and Products - MAT December 2023 (Sales \$ Billions)

Therapies			
Rank	Therapy	MAT Nov 2023	Absolute YoY Growth
1	IMMUNOLOGY	97.8	16.5
2	ONCOLOGICS	27.9	3.3
3	OTHER CARDIOVASCULARS	3.1	0.6
4	OTHER CNS	2.0	0.6
5	RESPIRATORY AGENTS	3.5	0.6
6	HIV ANTIVIRALS	6.0	0.5
7	DERMATOLOGICS	0.5	0.4
8	IMMUNOSUPPRESSANTS	0.8	0.2
9	SEX HORMONES	1.7	0.2
10	BLOOD COAGULATION	2.6	0.2

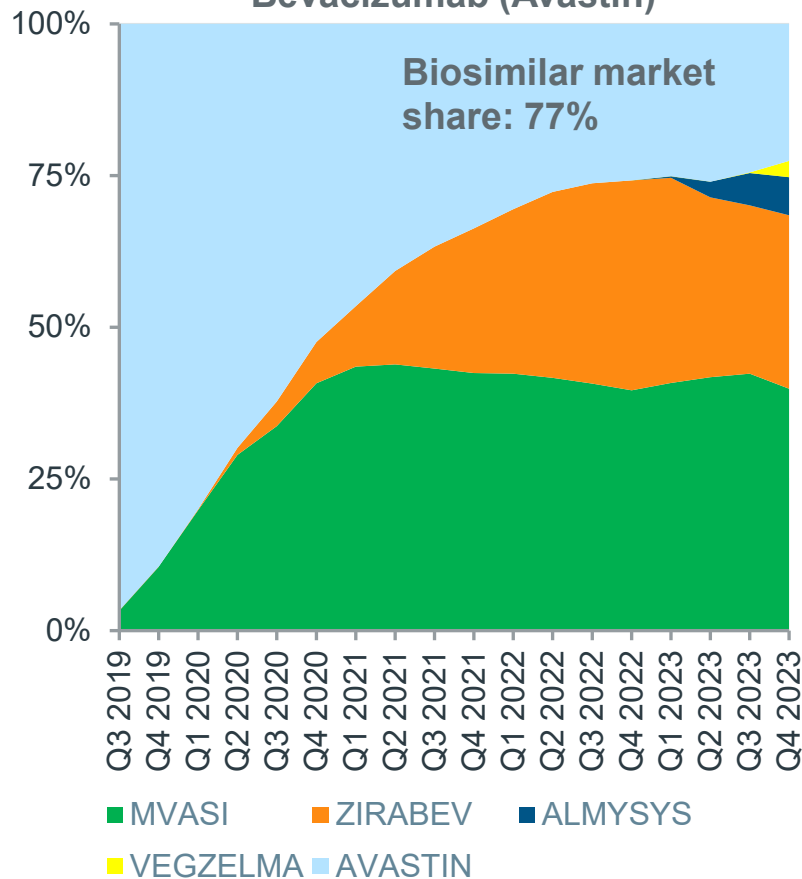
Products			
Rank	Product	MAT Dec 2023	Absolute YoY Growth
1	SKYRIZI	8.4	4.3
2	DUPIXENT	9.6	2.9
3	HUMIRA	28.4	2.5
4	RINVOQ	3.6	2.1
5	STELARA	12.8	1.7
6	LENALIDOMIDE	1.4	1.0
7	VERZENIO	2.1	0.8
8	TREMFYA	4.4	0.7
9	KESIMPTA	1.5	0.6
10	TALTZ	4.8	0.6

Source: IQVIA, National Sales Perspectives, 2023
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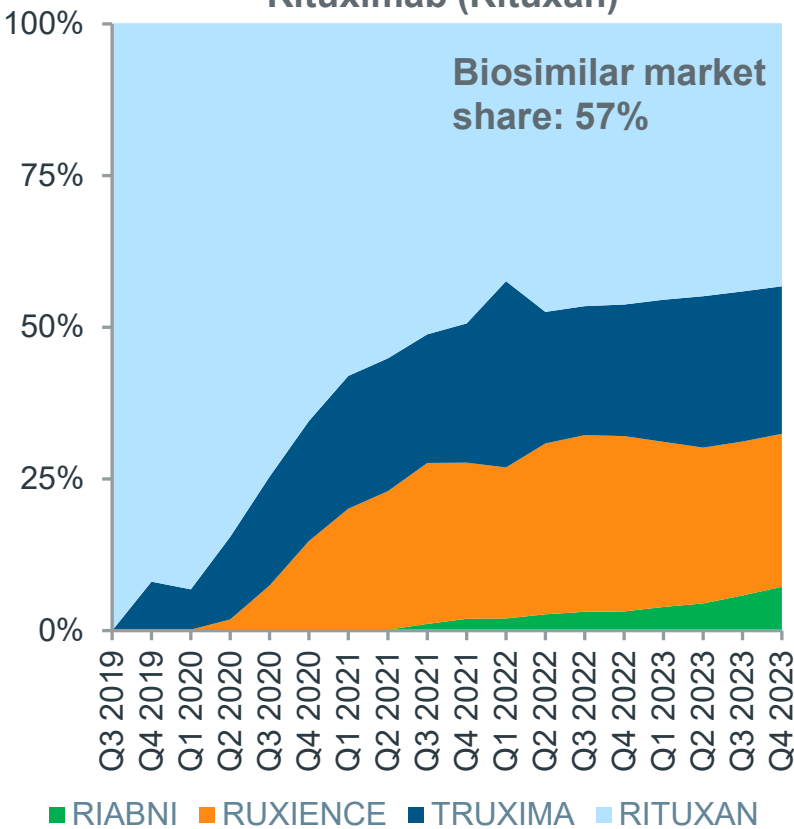
In Oncology biosimilars market share ranges from 57% - 77%

US Biosimilar Market Share, % Sales, Q4 2023

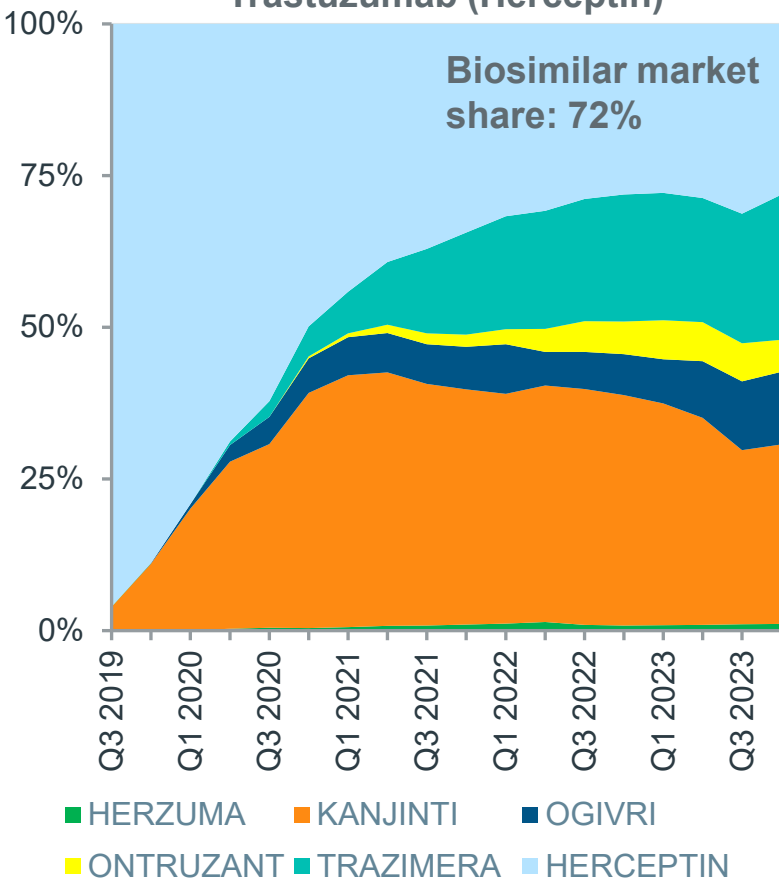
Bevacizumab (Avastin)



Rituximab (Rituxan)



Trastuzumab (Herceptin)

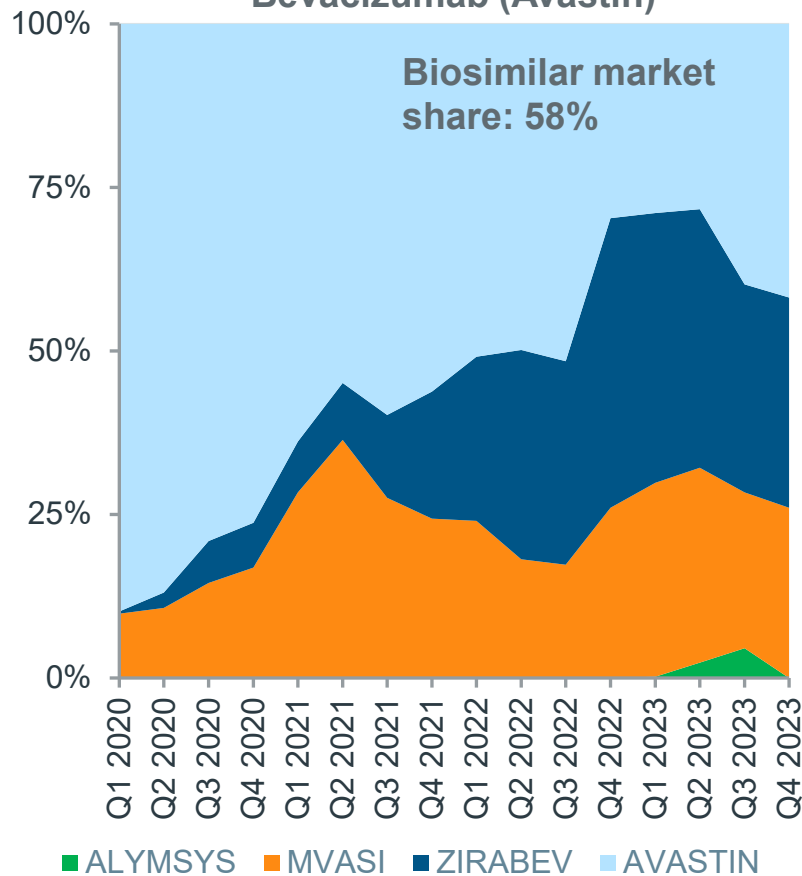


Originator

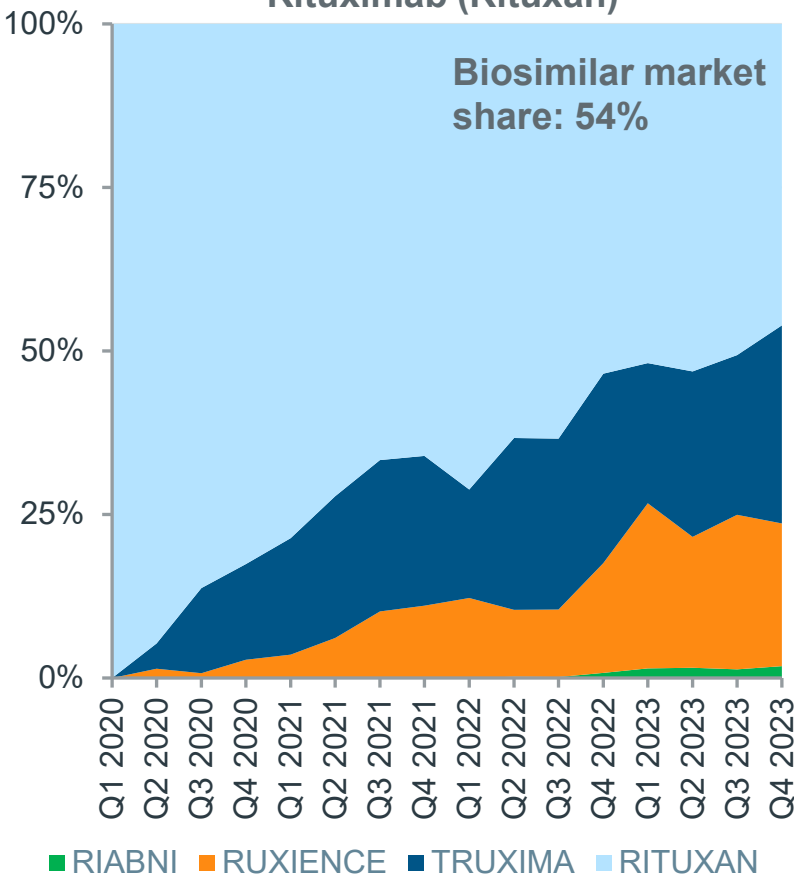
In Oncology biosimilars market share ranges from 54% - 83%

US Biosimilar Market Share, % of Adjusted Rx's, Q4 2023

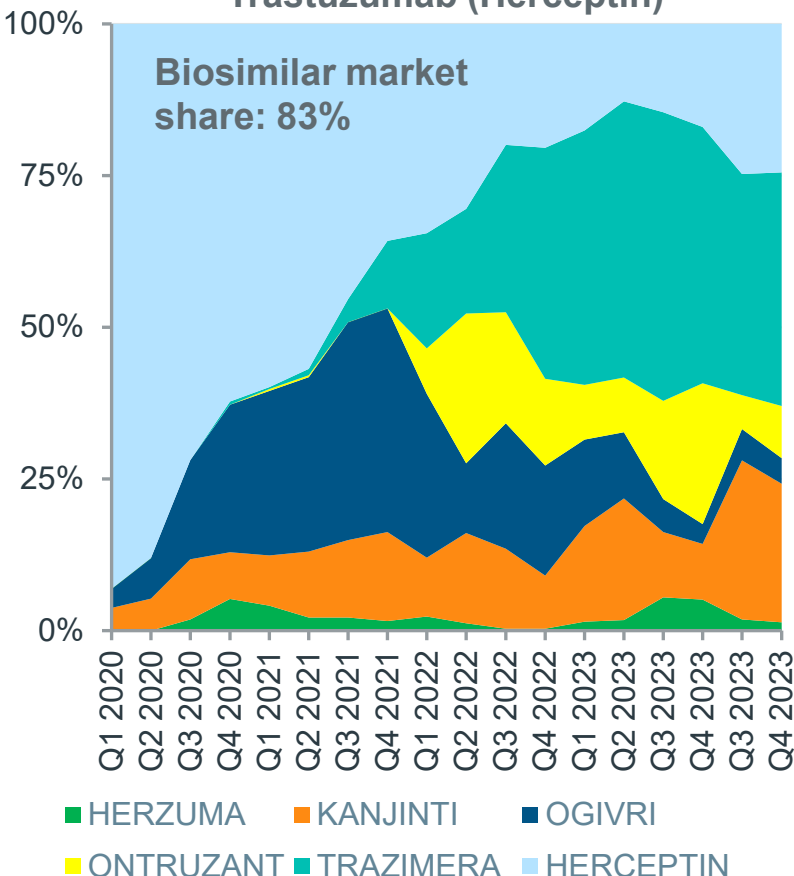
Bevacizumab (Avastin)



Rituximab (Rituxan)



Trastuzumab (Herceptin)

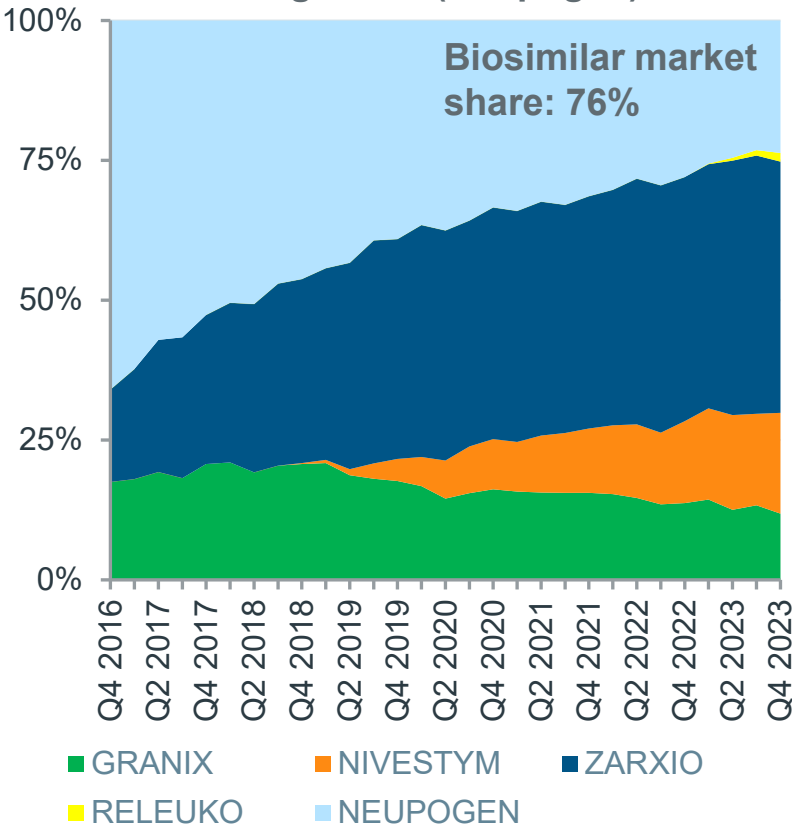


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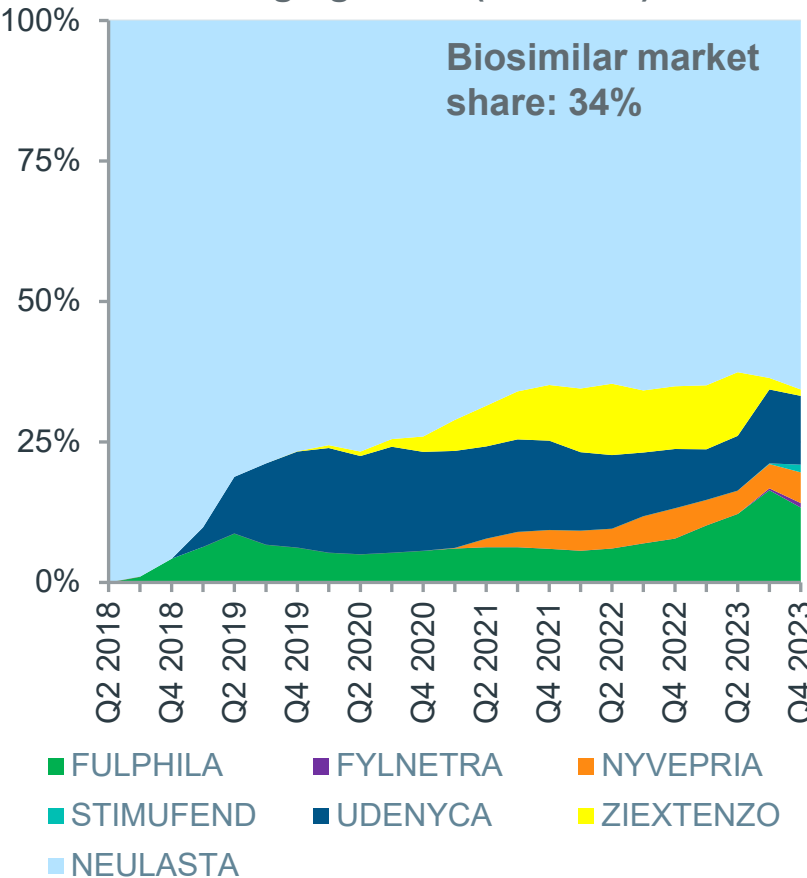
Filgrastim's biosimilar has 76% market share

US Biosimilar Market Share, % of Sales, Q4 2023

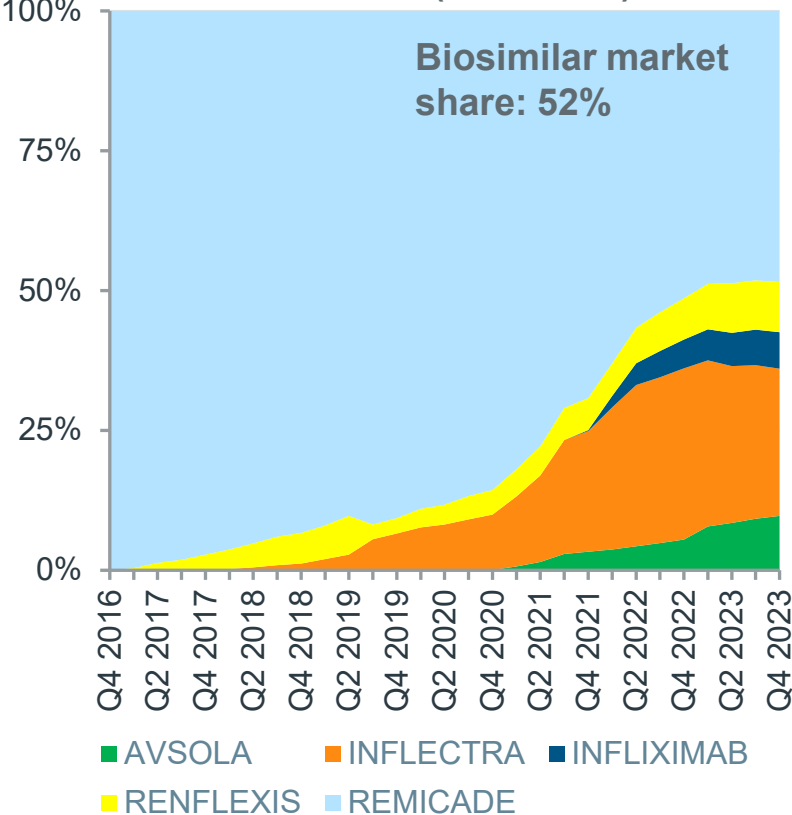
Filgrastim (Neupogen)



Pegfilgrastim (Neulasta)



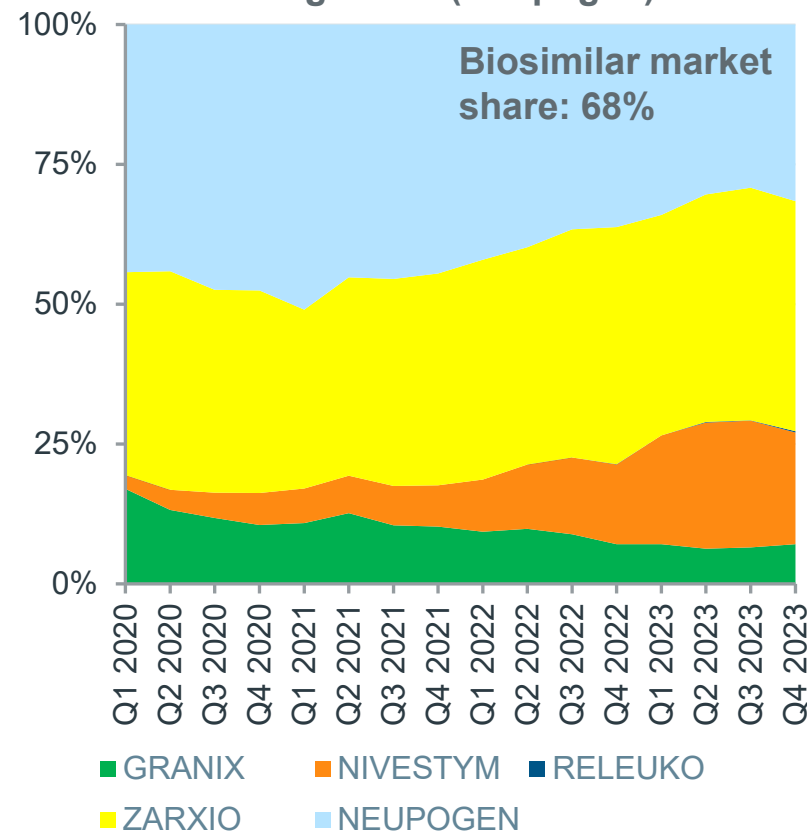
Infliximab (Remicade)



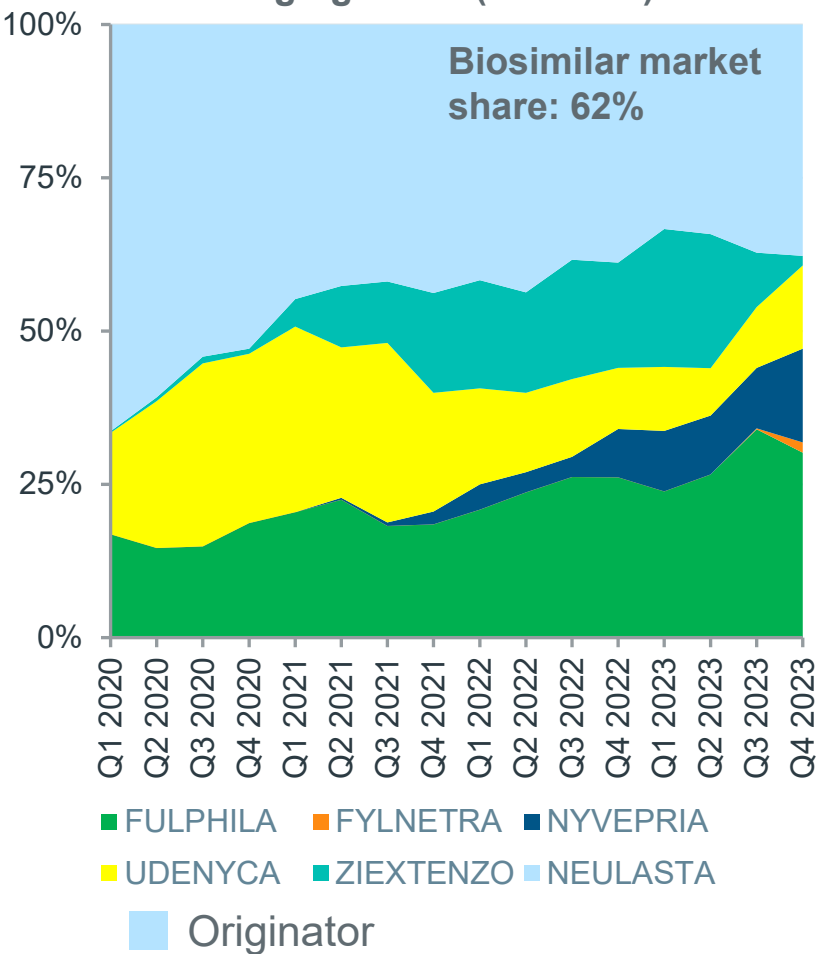
Filgrastim's biosimilar has 68% market share

US Biosimilar Market Share, % of Adjusted Rx's, Q4 2023

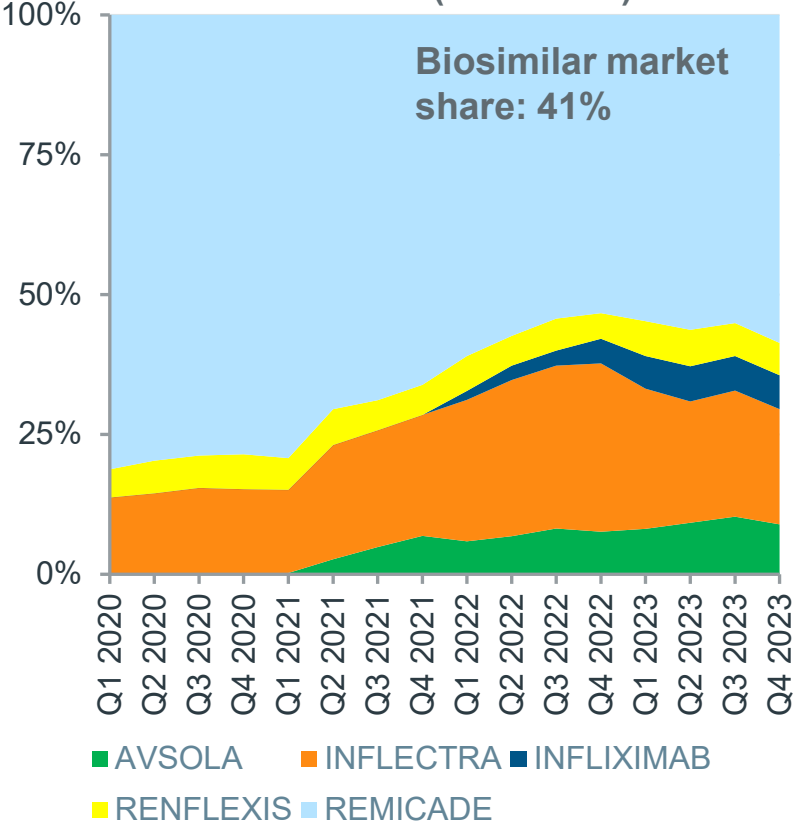
Filgrastim (Neupogen)



Pegfilgrastim (Neulasta)

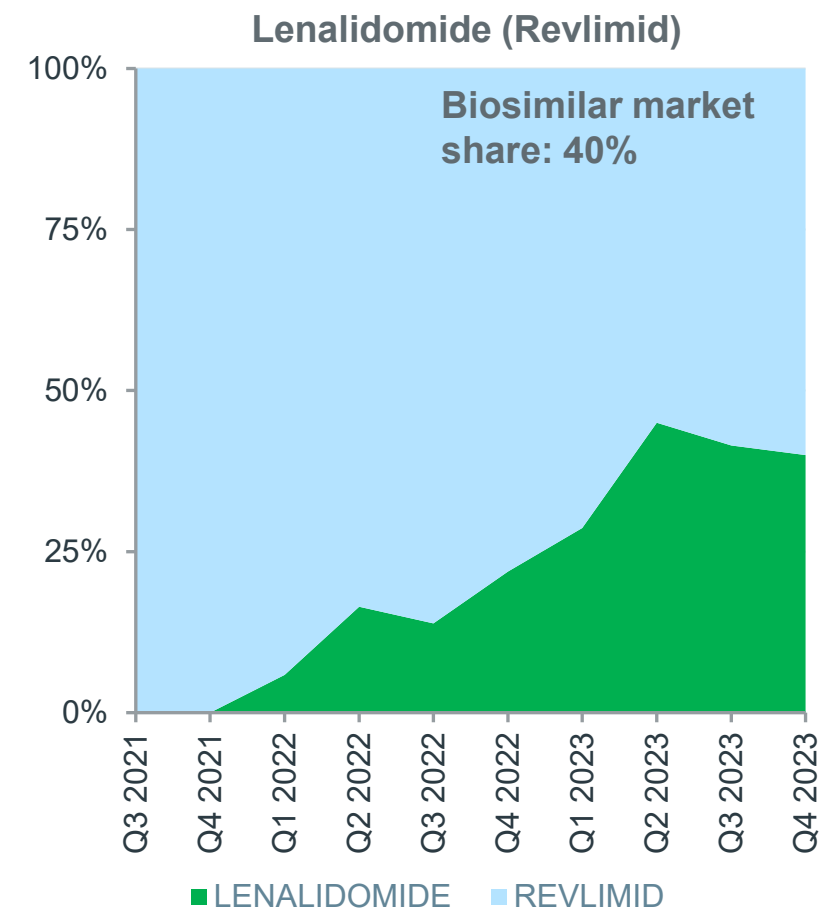
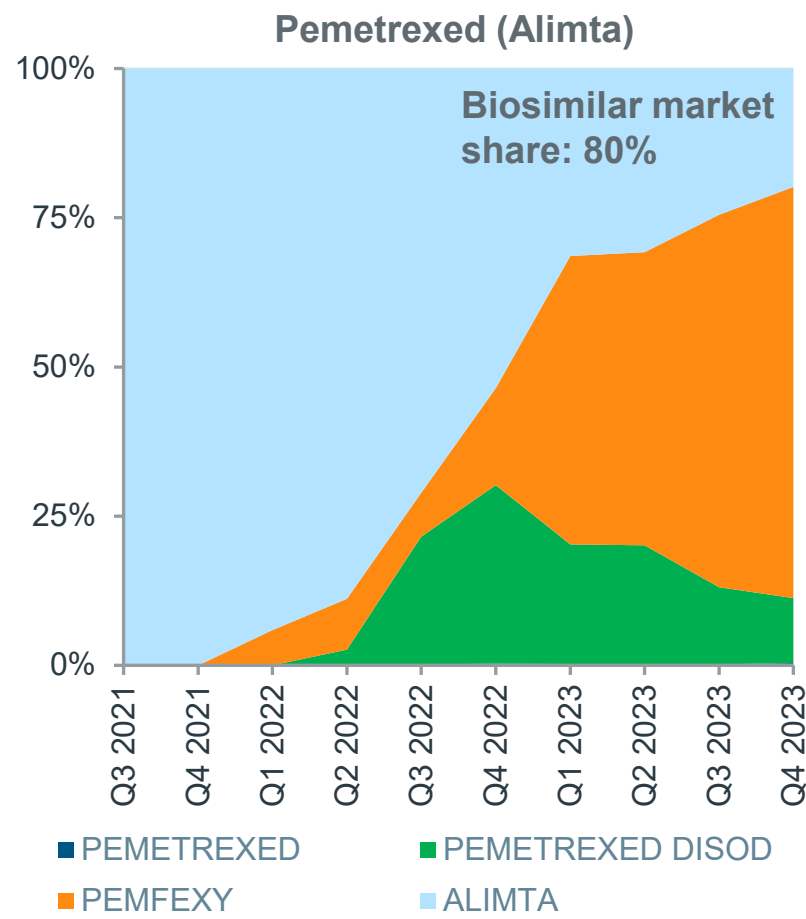
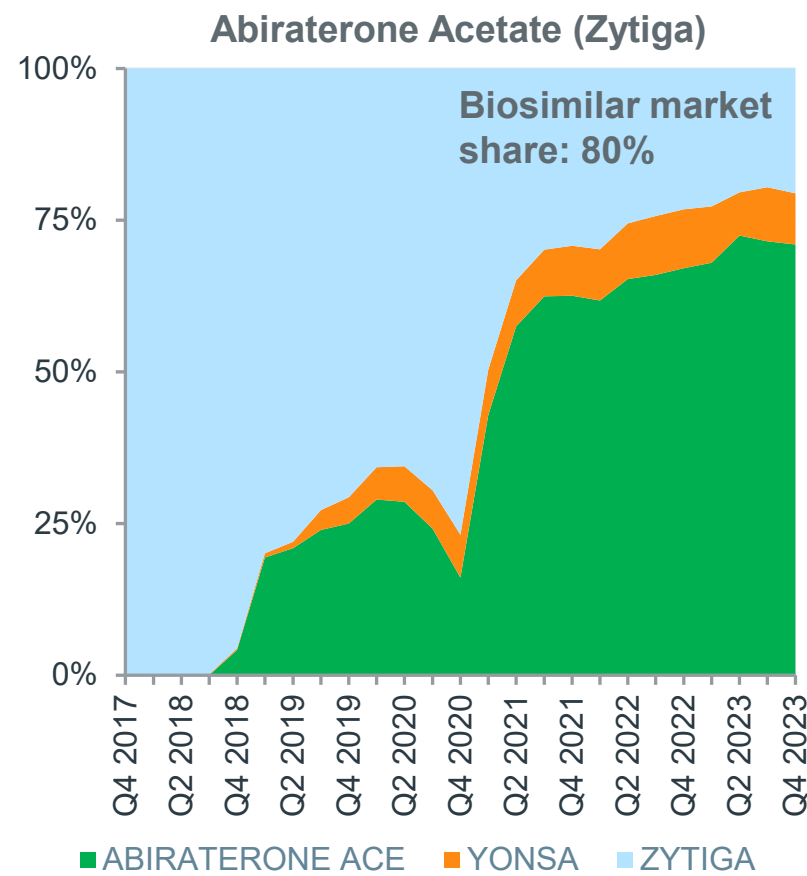


Infliximab (Remicade)



Zytiga's and Alimta's biosimilars both hvae 80% market share

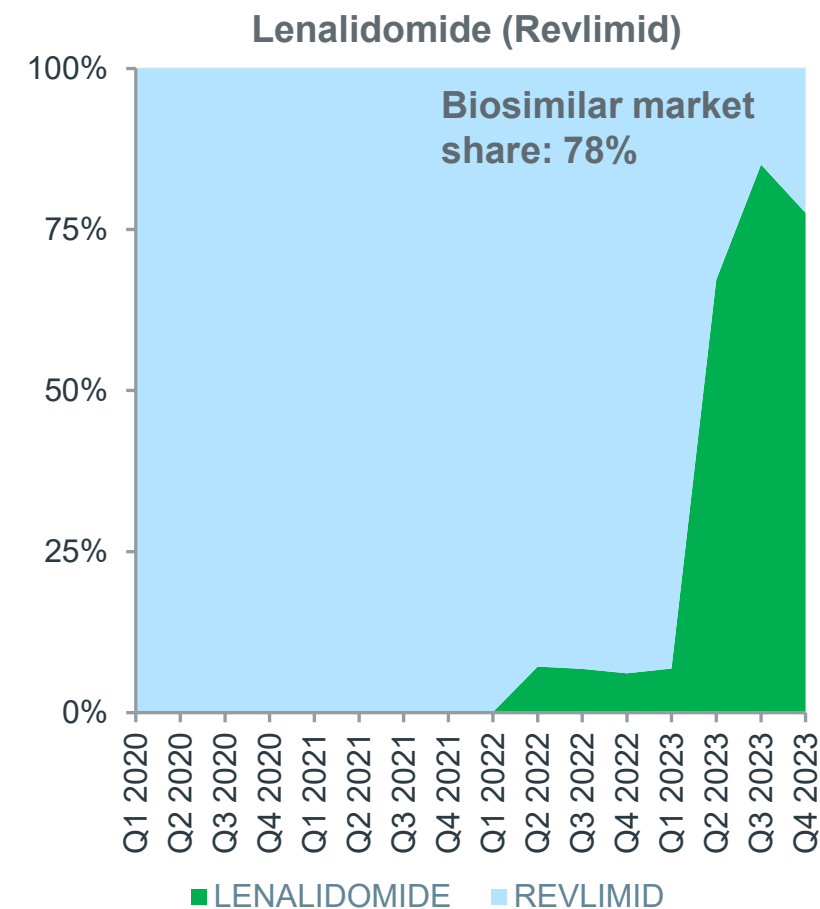
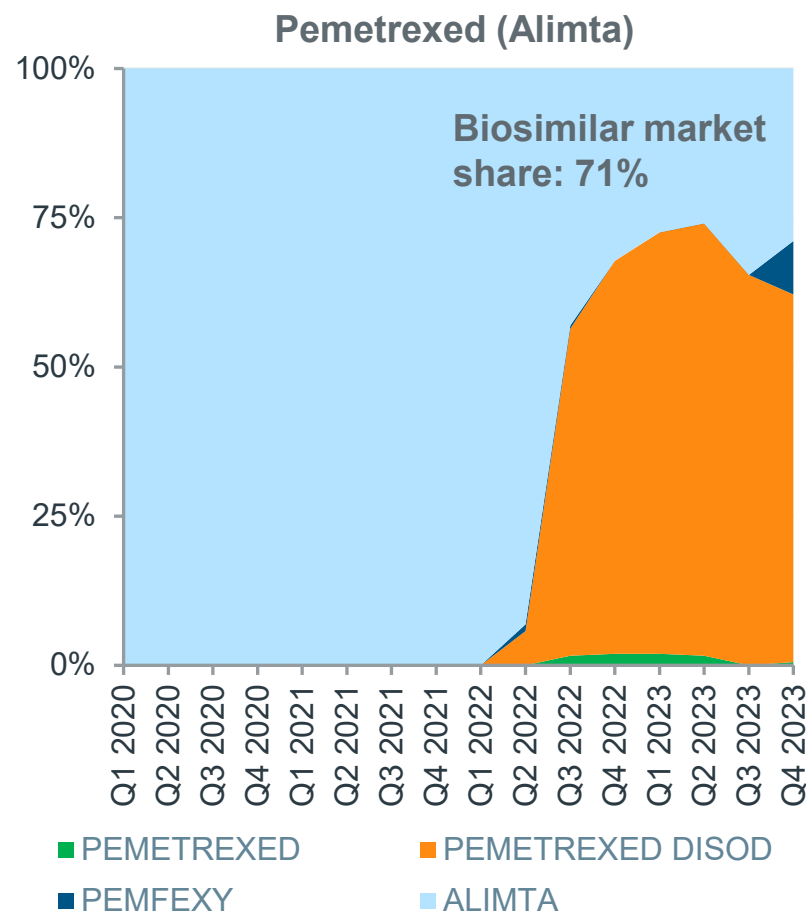
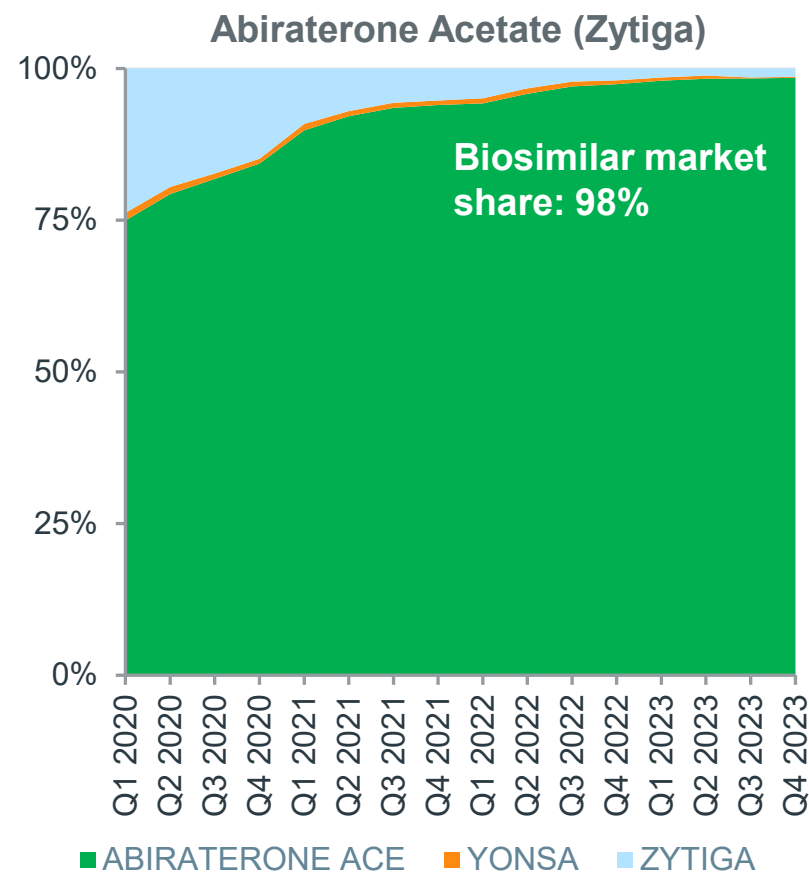
US Biosimilar Market Share, % of Sales, Q4 2023



Originator

Zytiga's biosimilar has 98% market share

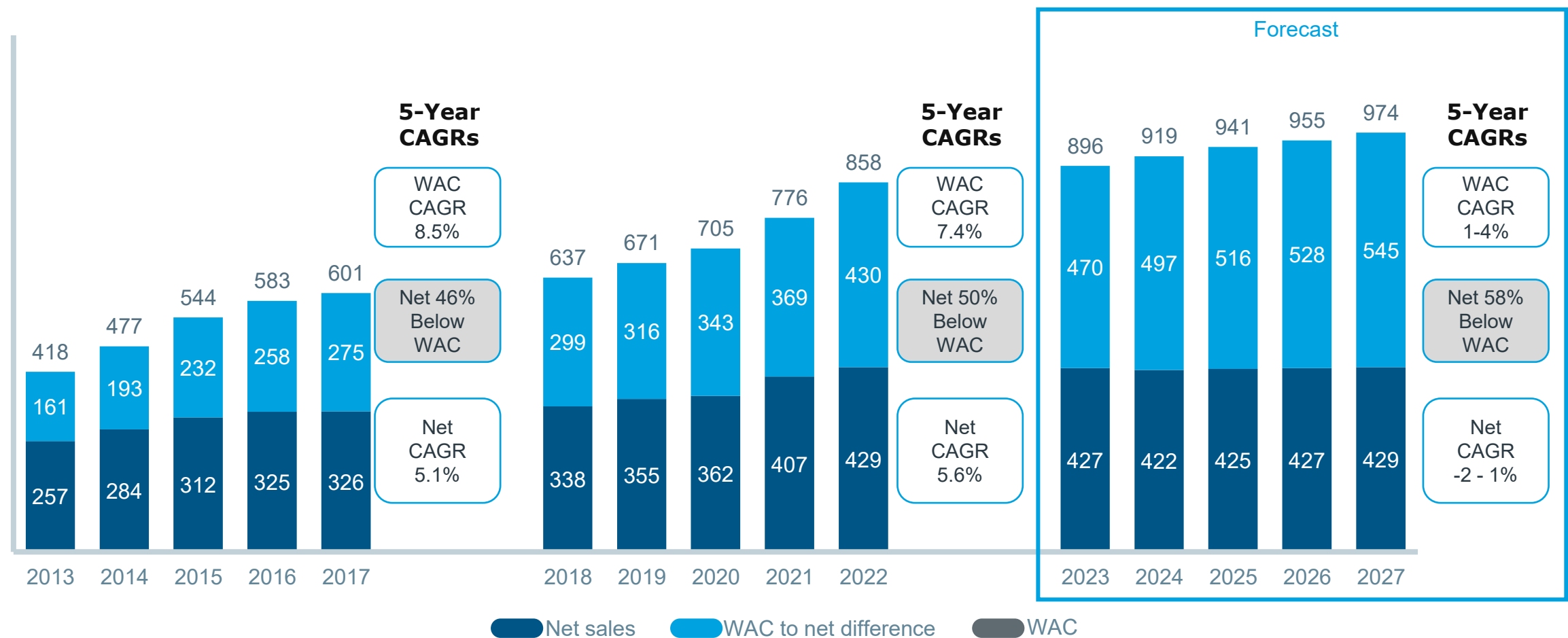
US Biosimilar Market Share, % of Adjusted Rx's, Q4 2023



■ Originator

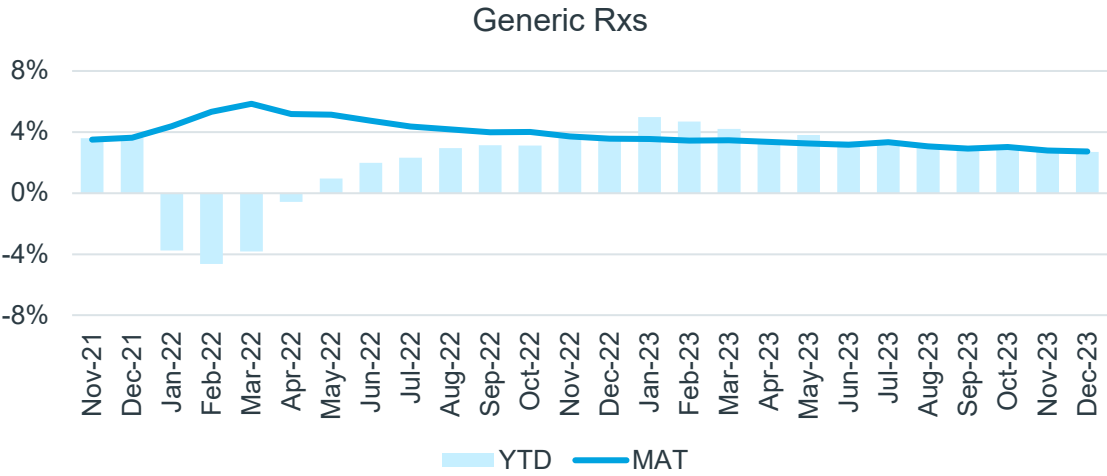
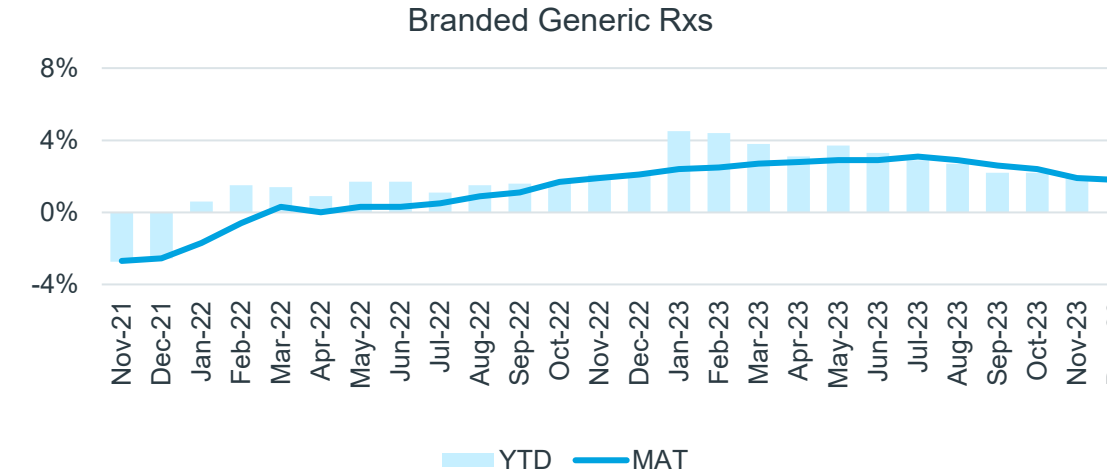
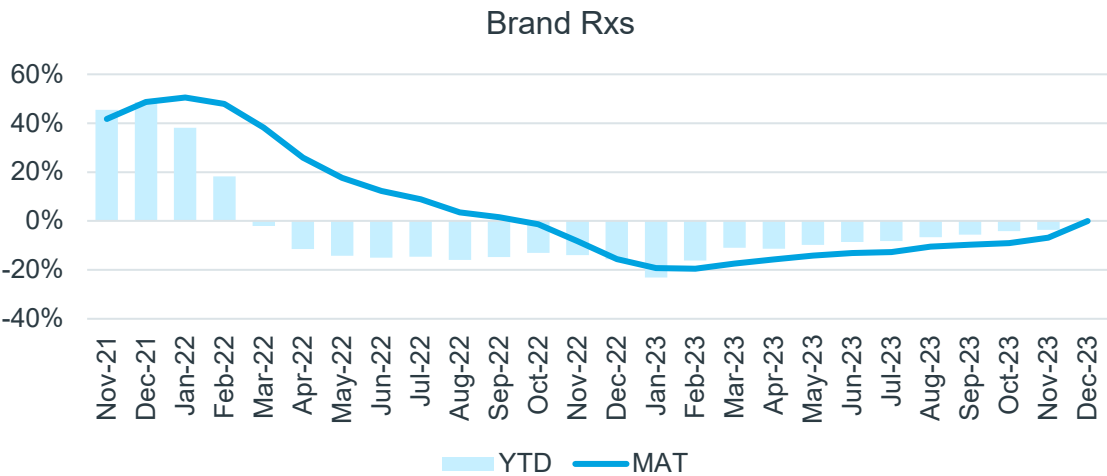
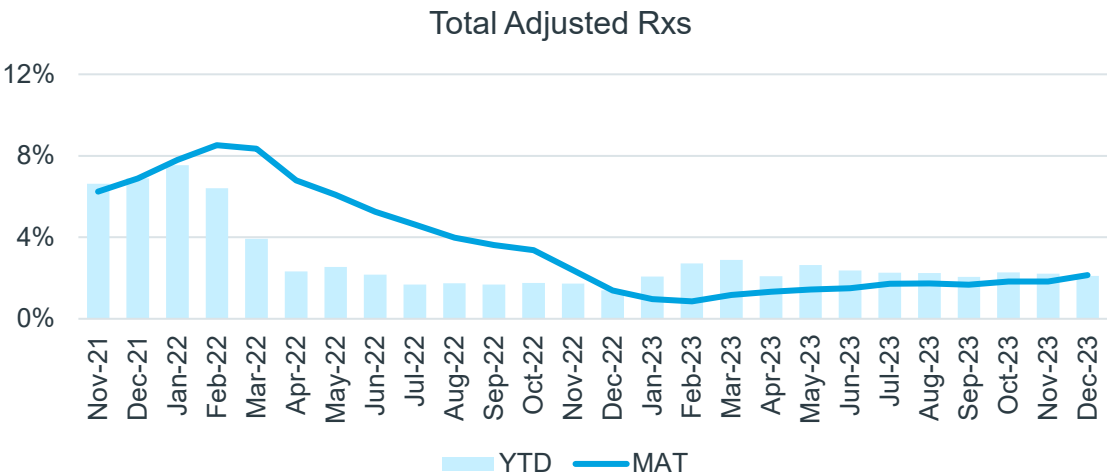
U.S. spending on medicines is forecast to be largely unchanged over the next 5 years with growth expected between -2 to 1%

U.S. medicine spending and growth at WAC and estimated net 2013–2027



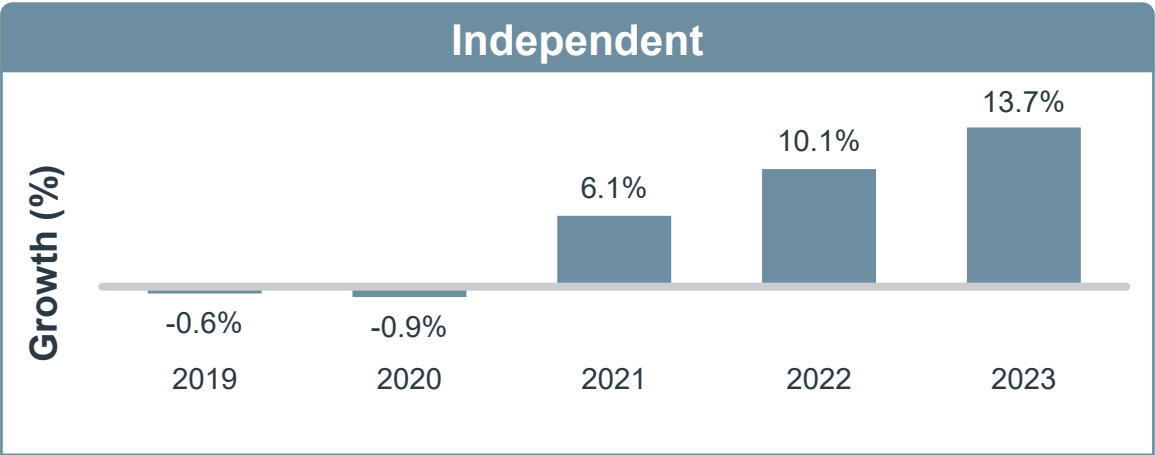
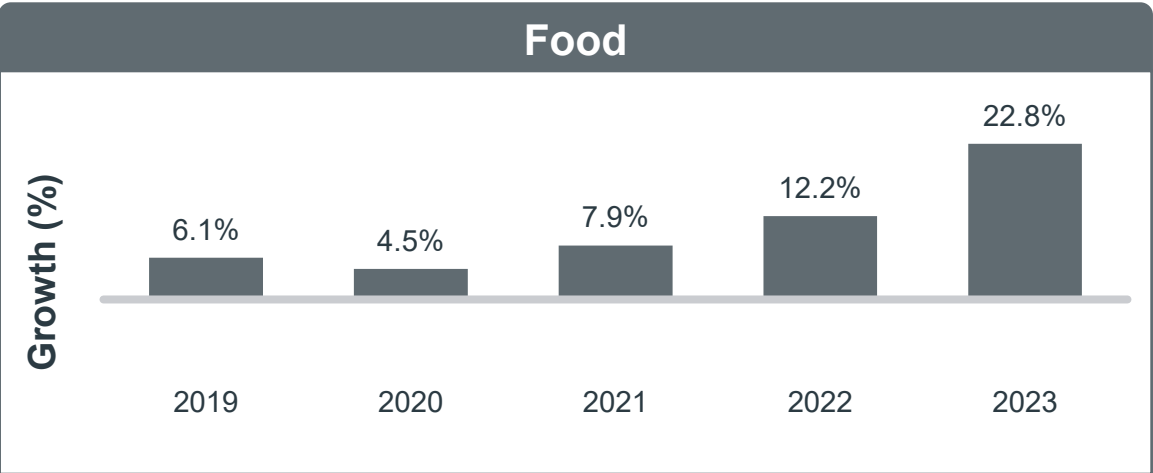
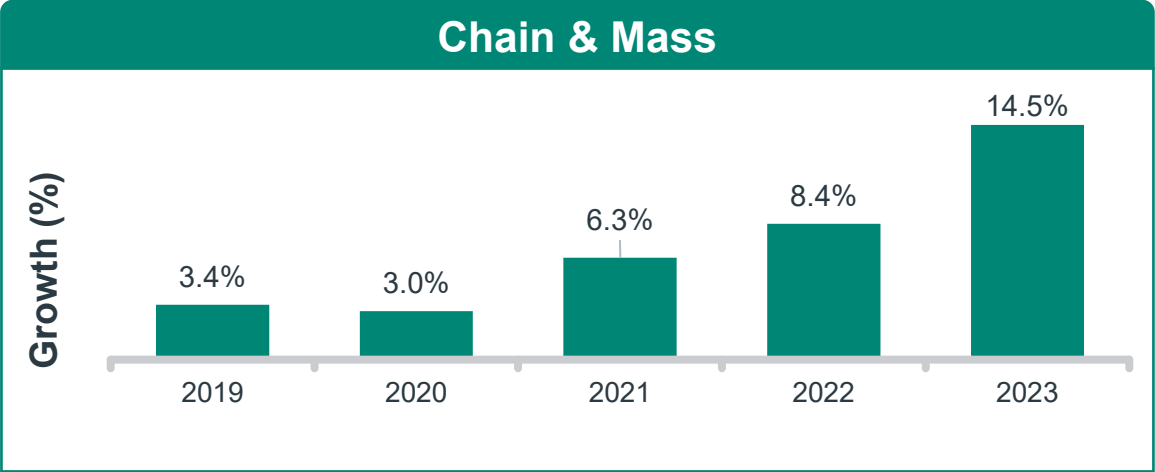
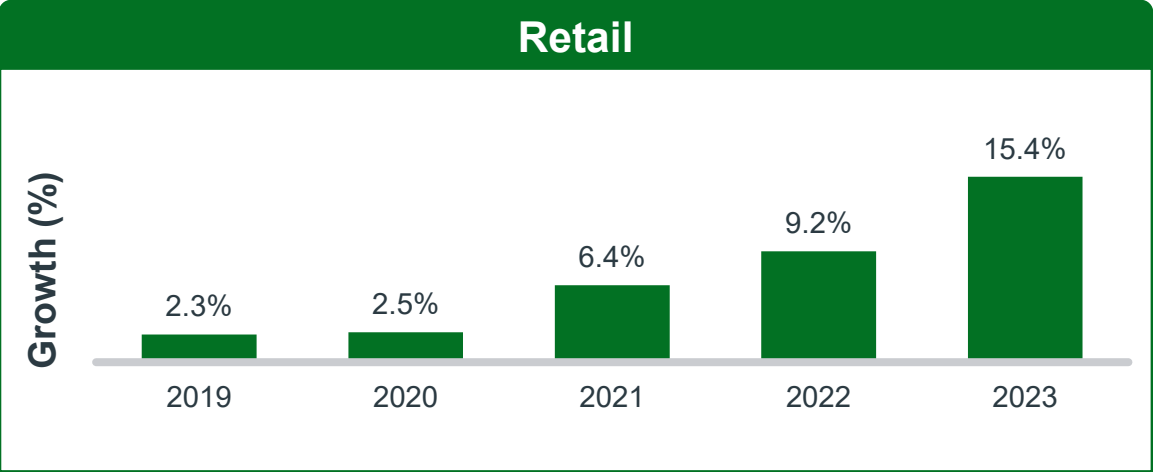
Source: IQVIA Institute, Mar 2023.
The Use of Medicines in the U.S. 2023: Usage and Spending Trends and Outlook to 2027. Report by the IQVIA Institute for Human Data Science.
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As COVID-19 vaccines have declined, overall Rx growth has slowed, and Brands have been in decline



Food shows strongest growth

Growth (%) of Sales



Source: IQVIA, National Sales Perspectives, December 2023
Note: Limited to Rx and OTC Insulins; Includes Retail

Ozempic and Mounjaro have the greatest absolute sales gains in the last 12 months

Sales \$ in Billions

Retail Products 1 - 10 (Highest One-Year Absolute Gains)			
Product	MAT Dec 2022	MAT Dec 2023	Abs. Difference
OZEMPIC	12.5	22.3	9.8
MOUNJARO	2.5	11.4	8.9
WEGOVY	1.2	6.2	5.0
JARDIANCE	9.7	13.1	3.4
ELIQUIS	14.4	17.1	2.7
FARXIGA	4.7	6.7	2.0
AREXVY	0.0	1.6	1.6
COMIRNATY	0.0	1.5	1.5
SPIKEVAX	0.0	1.4	1.4
LEVEMIR FLEXPEN	0.0	1.2	1.2

Retail Products 11 - 20 (Highest One-Year Absolute Gains)			
Product	MAT Dec 2022	MAT Dec 2023	Abs. Difference
RYBELSUS	2.4	3.5	1.1
TRELEGY ELLIPTA	3.7	4.7	1.1
ENTRESTO	3.2	4.1	0.9
VRAYLAR	2.3	3.2	0.9
BIKTARVY	6.9	7.8	0.9
ABRYSVO	0.0	0.7	0.7
NURTEC	1.8	2.5	0.7
TRULICITY	12.7	13.4	0.7
LISDEXAMFETAMIN DI	0.0	0.6	0.6
DEXCOM G7	0.0	0.6	0.6

There are no significant differences in the top 10 therapy areas by class of trade

Therapy Area Rank based on MAT Ending Dec 2023 Retail Adj. Rx Volumes

Therapy Area	Indep	Mass	Food	Chain	Retail
ANTIHYPERTENSIVES, PLAIN & COMBO	1	1	1	1	1
MENTAL HEALTH	2	2	2	2	2
LIPID REGULATORS	3	3	3	3	3
ANTIDIABETICS	5	4	4	4	4
PAIN	4	5	5	5	5
ANTIBACTERIALS	10	7	7	6	6
ANTI-ULCERANTS	6	8	6	7	7
NERVOUS SYSTEM DISORDERS	7	9	8	8	8
RESPIRATORY AGENTS	8	10	11	9	9
THYROID ANTI-THYROID AND IODINE PREPS	12	6	9	10	10

- Notable areas highlighted in Green
- The largest variation is that Antibacterials are number 10 for Independents while number 6 for overall Retail
- Number 9 for Independents and number 10 for Food is Other CNS

There are no significant differences amongst the top 10 products by class of trade

Product Rank based on MAT Ending Dec 2023 Retail Adj. Rx Volumes

Product Name	Indep	Mass	Chain	Food	Retail
ATORVASTATIN CA	1	1	1	1	1
AMLODIPINE BESY	2	4	2	2	2
LEVOTHYROXINE SOD	4	2	3	4	3
LISINOPRIL	3	3	4	3	4
LOSARTAN POT	5	5	5	5	5
ROSUVASTATIN CAL	10	7	6	6	6
METOPROLOL SUCCIN	9	8	7	7	7
METFORMIN HCL	8	6	8	8	8
GABAPENTIN	7	10	10	9	9
SERTRALINE HCL	13	11	9	11	10

- Notable areas highlighted in Green
- Omeprazole (Rx) is number 6 for Independents and number 10 for Food
- Hydrochlorothiazide is number 9 for Mass

Latuda has the greatest absolute sales loss within last 12 months

Sales \$ in Billions

Retail Products 1 - 10 (Highest One-Year Absolute Losses)			
Product	MAT Dec 2022	MAT Dec 2023	Abs. Difference
LATUDA	3.5	0.8	(2.7)
LEVEMIR FLEXTOUCH	1.6	0.1	(1.5)
VICTOZA 3-PAK	1.9	1.3	(0.6)
VIMPAT	0.7	0.2	(0.5)
JANUVIA	5.0	4.6	(0.4)
ADDERALL XR	1.3	0.9	(0.4)
PROAIR HFA	0.3	0.0	(0.3)
FLOVENT HFA	1.4	1.1	(0.3)
DEXILANT	0.4	0.1	(0.3)
TROKENDI XR	0.4	0.2	(0.3)

Retail Products 11 - 20 (Highest One-Year Absolute Losses)			
Product	MAT Dec 2022	MAT Dec 2023	Abs. Difference
FLUZONE HD QUADRI	0.8	0.6	(0.3)
SPIRIVA HANDIHALER	1.0	0.7	(0.3)
PENNSAID PMP	0.4	0.1	(0.2)
GENVOYA	1.6	1.4	(0.2)
NOVOLOG FLEXPEN	2.4	2.1	(0.2)
BASAGLAR KWIKPEN	1.5	1.2	(0.2)
VIIBRYD	0.3	0.0	(0.2)
FLUBLOK QUAD	0.3	0.1	(0.2)
CONCERTA	1.1	0.9	(0.2)
PRADAXA	0.3	0.1	(0.2)

Wegovy has the greatest year over year sales growth in Retail

Top 20 Products for Retail Sales
\$ Billions, MAT December 2023

RETAIL					
Rank	Product	Class	Brand/Generic	MAT Dec 2023	YoY Growth
1	OZEMPIC	ANTIDIABETICS	BRAND	22.3	78.7%
2	ELIQUIS	ANTITHROMBOTICS	BRAND	17.1	18.7%
3	TRULICITY	ANTIDIABETICS	BRAND	13.4	5.3%
4	JARDIANCE	ANTIDIABETICS	BRAND	13.1	34.7%
5	MOUNJARO	ANTIDIABETICS	BRAND	11.4	353.5%
6	BIKTARVY	HIV ANTIVIRALS	BRAND	7.8	12.3%
7	FARXIGA	ANTIDIABETICS	BRAND	6.7	41.3%
8	XARELTO	ANTITHROMBOTICS	BRAND	6.6	2.8%
9	WEGOVY	ANTI-OBESITY PREPS, EXCL. DIETETICS	BRAND	6.2	414.8%
10	TRELEGY ELLIPTA	RESPIRATORY AGENTS	BRAND	4.7	29.5%

Source: IQVIA, National Sales Perspectives, 2024. Limited to Rx and OTC Insulins

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The top 20 products total over 143 billion sales dollars

Top 20 Products for Retail Sales
\$ Billions, MAT December 2023

RETAIL					
Rank	Product	Class	Brand/Generic	MAT Dec 2023	YoY Growth
11	JANUVIA	ANTIDIABETICS	BRAND	4.6	-8.0%
12	VYVANSE	ADHD	BRAND	4.5	1.2%
13	ENTRESTO	ANTIHYPERTENSIVES, PLAIN & COMBO	BRAND	4.1	29.1%
14	HUMIRA	IMMUNOLOGY	BRAND	3.5	4.3%
15	RYBELSUS	ANTIDIABETICS	BRAND	3.5	47.0%
16	LANTUS SOLOSTAR	ANTIDIABETICS	BRAND	3.4	-4.7%
17	VRAYLAR	MENTAL HEALTH	BRAND	3.2	38.1%
18	SYMBICORT	RESPIRATORY AGENTS	BRAND	3.0	3.1%
19	NURTEC	MIGRAINE	BRAND	2.5	37.8%
20	TRESIBA	ANTIDIABETICS	BRAND	2.5	-4.0%

Source: IQVIA, National Sales Perspectives, 2023. Limited to Rx and OTC Insulins

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