

US Generics & Biosimilars Trends, Issues & Outlook for AAM

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February 14, 2023

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Agenda

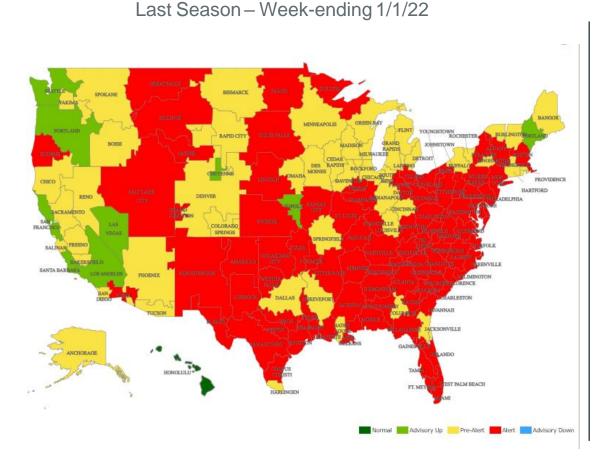
- + COVID, Flu, RSV, Colds, Etc.
- + Market Trends: Utilization
- + Where are we now?
- + Generics and Biosimilars
- + Outlook



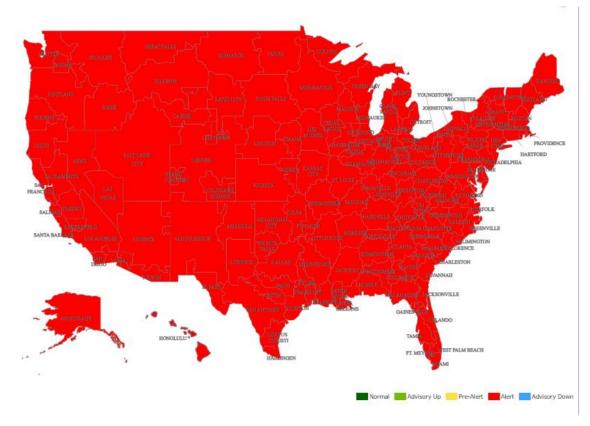


COVID, Flu, RSV, Colds, Etc.

FAN[®] reports are showing the entire country is in Alert status, a much different picture than this time last year



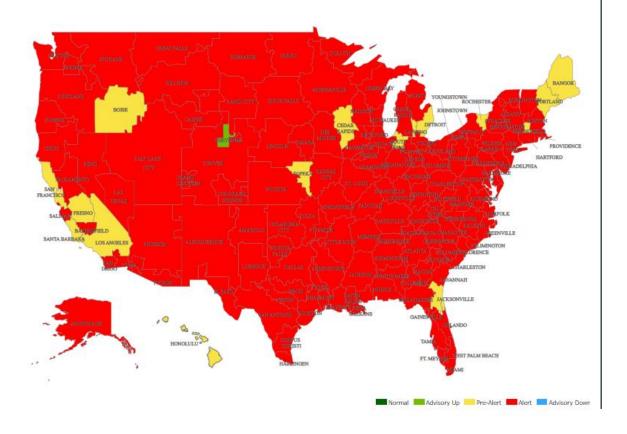
Current Season – Week-ending 12/31/22



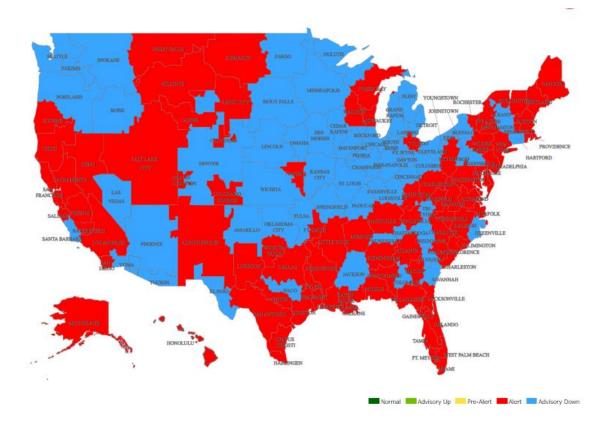


FAN[®] reports reflect that much of the country is in "Advisory Down" status, a much different picture than this time last year

Last Season – Week-ending 1/14/22

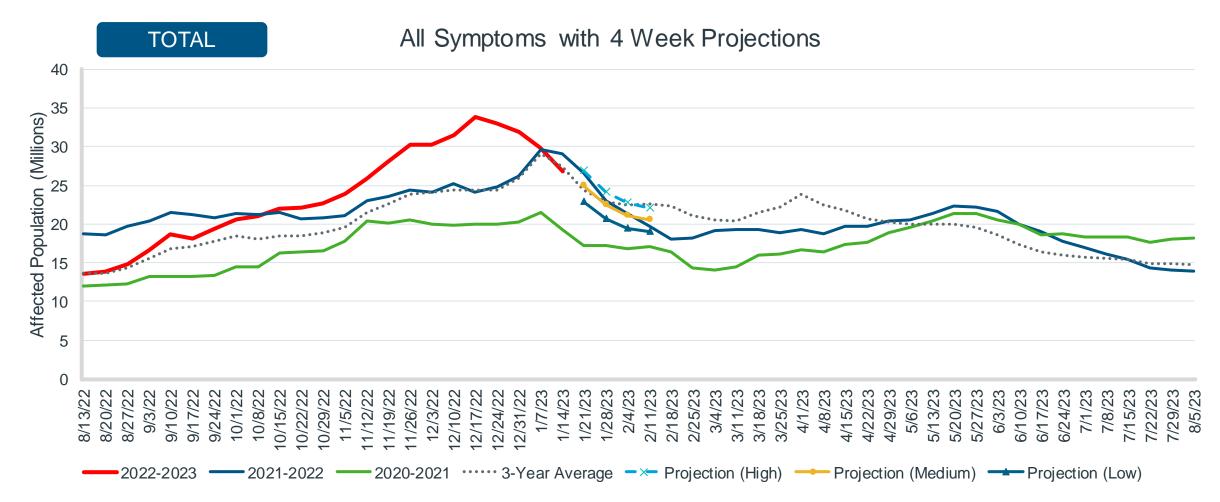


Current Season – Week-ending 1/14/22





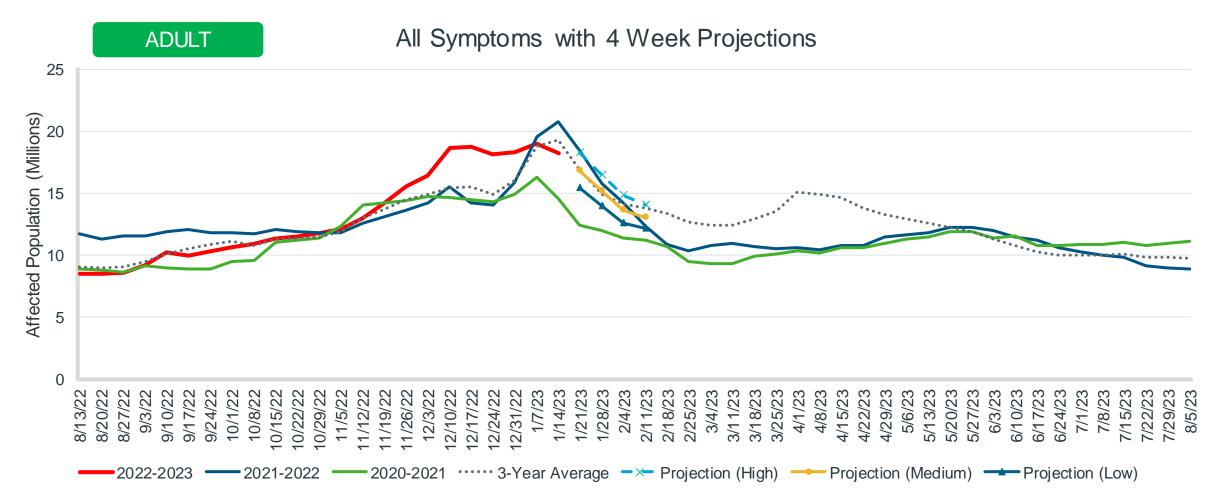
All symptoms run above historical trends and projections anticipate declines



Updated through January 14, 2023



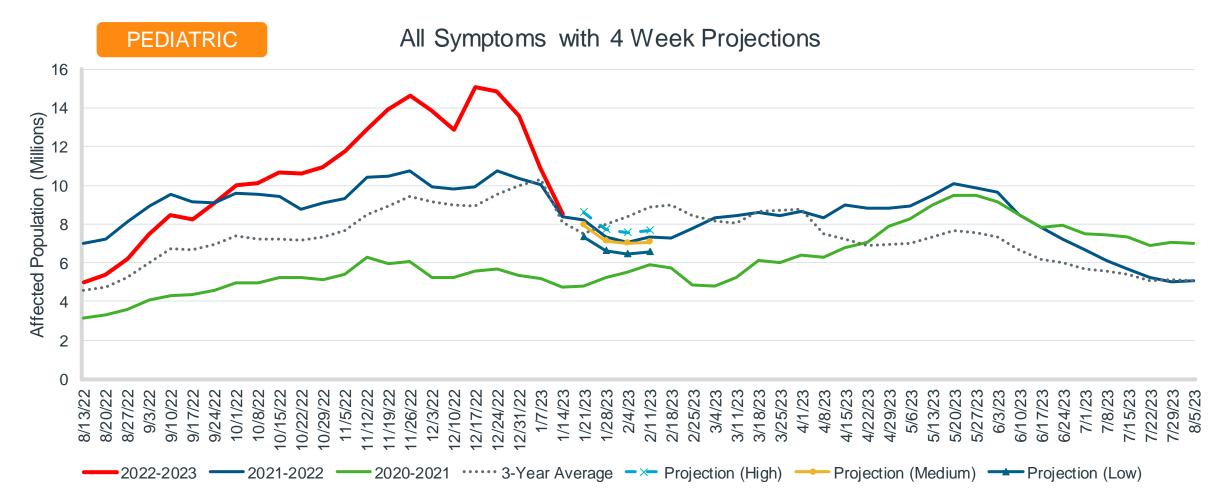
Adults ran above historical trends but are in decline



Updated through January 14, 2023



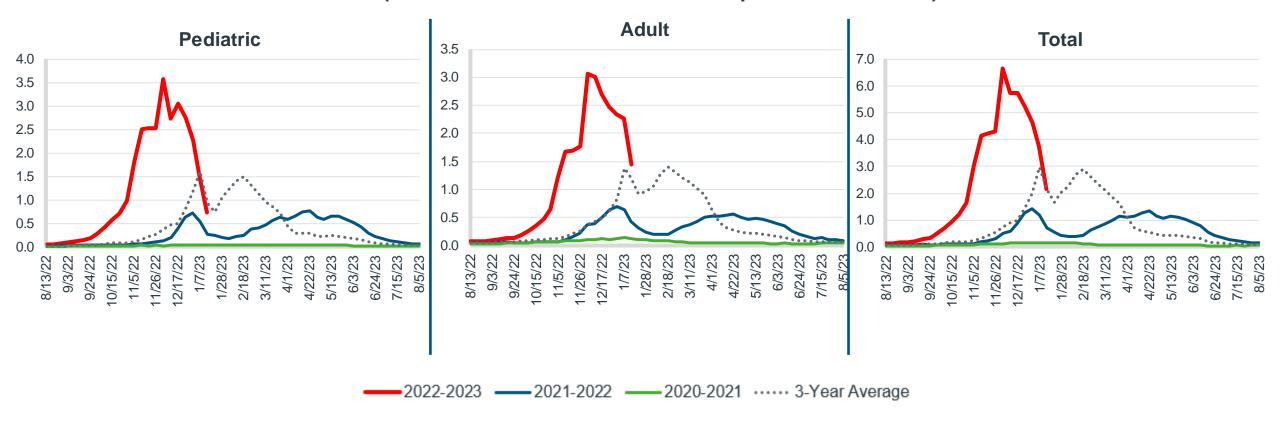
Pediatrics numbers are decreasing



Updated through December 31, 2022



ILI: Cases peaked in early December 2022 but are declining rapidly

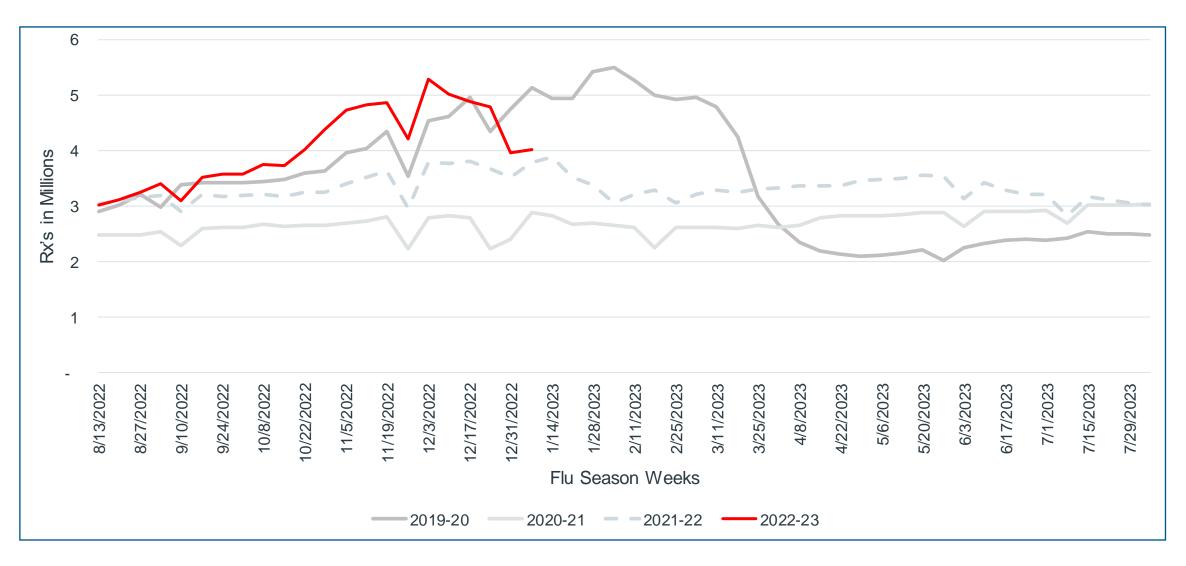


ILI (Influenza Like Illness - Affected Population in Millions)

Updated through January 14, 2023



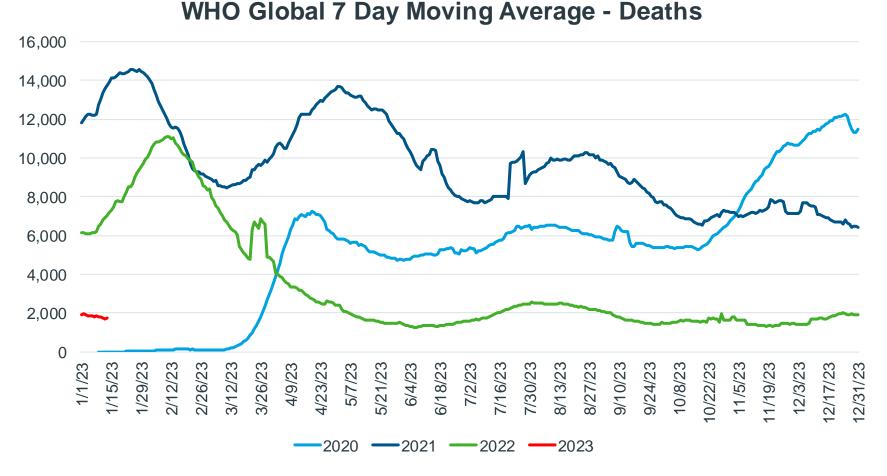
Cough, Cold and Flu Rx's are slowing as symptoms are slowing







According to the WHO, global deaths continue to decline



Data Source: <u>https://covid19.who.int/WHO-COVID-19-global-data.csv</u>, updated through 1/13/23





Market Trends: Utilization

Medical claims/activity

The Health Services Utilization Index indicates the U.S. is operating at nearly pre-COVID-19 levels

Overview of Health Services Utilization Index

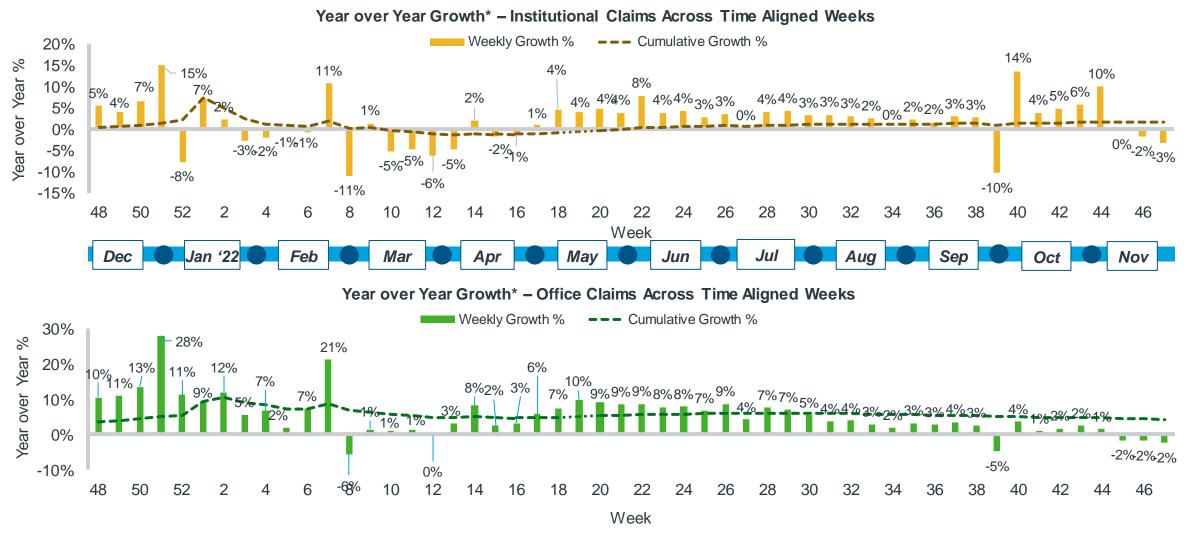


Source: IQVIA Institute; IQVIA Medical Claims Data; LAAD Prescription data, week ending 12/31/2021. The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2026. Report by the IQVIA Institute for Human Data Science.

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Cumulative institutional claim trend is flat in 2022 compared to 2021, while office claims increase over 2021

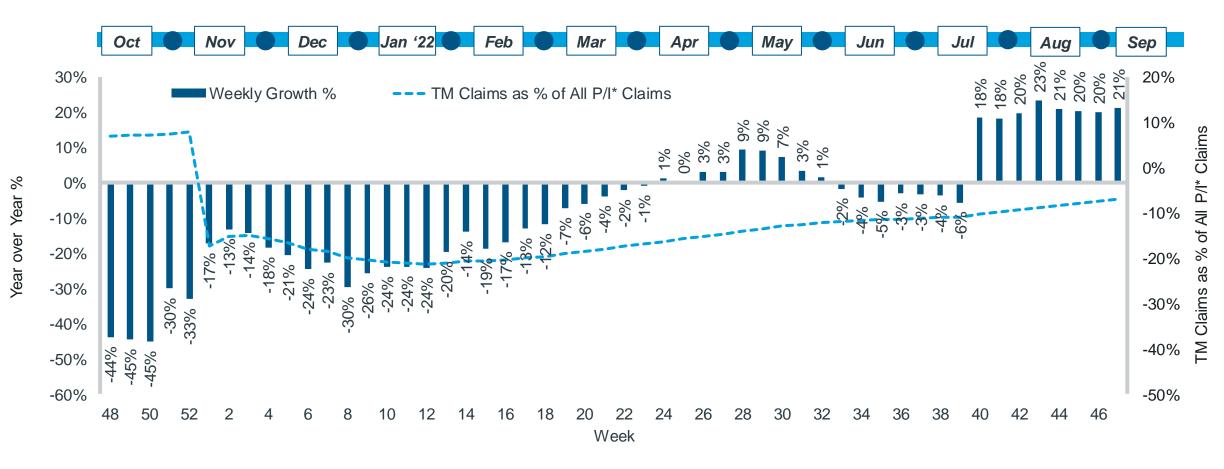


Source: IQVIA: Medical Claims Data Analysis, 2022 Notes: Week 52 2021 = 12/31/2021; Week 47 2022 = 11/25/2022



After a dramatic entrance, telemedicine use slows overall, though a slight increase in usage in Nov 2022 compared to Nov 2021

Slight increases in telemedicine visits occurs in August and November 2022

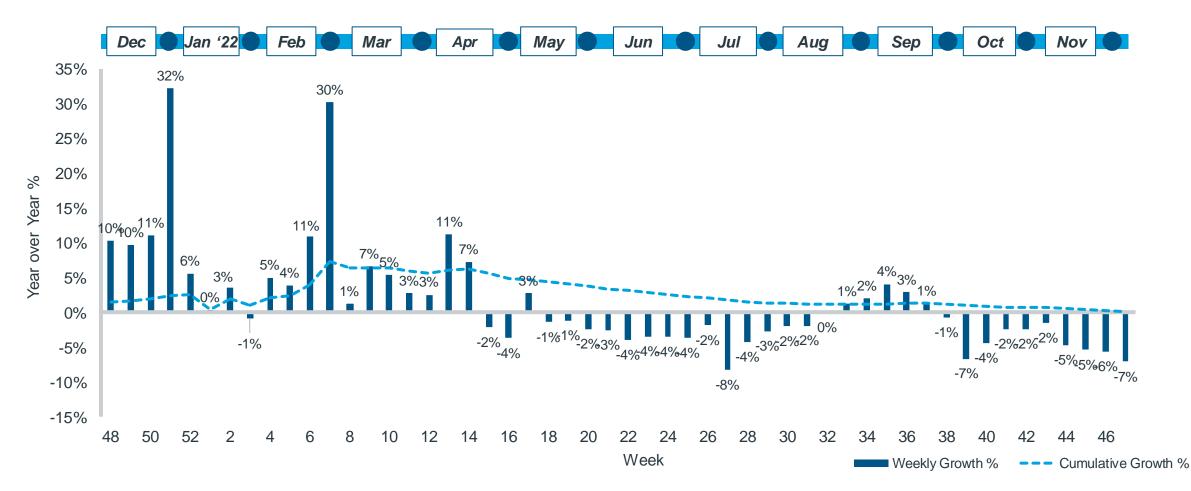


Source: IQVIA: Medical Claims Data Analysis, 2022 Week 47 2022 = 11/25/2022; Week 52 2021 = 12/31/2021 *All P/I Claims total indicates Telemedicine, Office, and Institutional claims



Elective procedures in 2022 are declining in recent weeks, but cumulatively 2022 is flat compared to 2021

Year over Year Growth – Elective Procedure Across Time Aligned Weeks



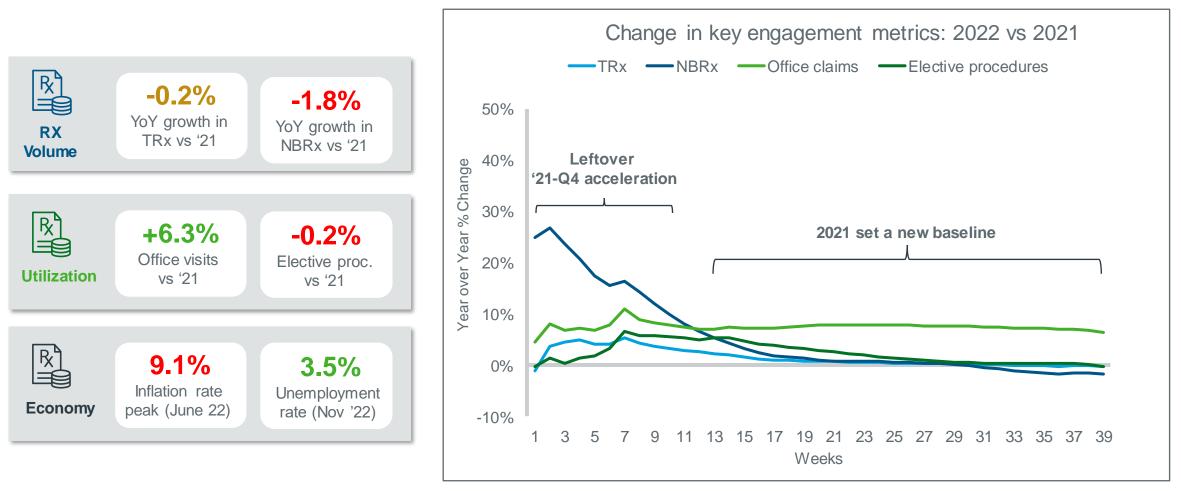
Source: IQVIA: Medical Claims Data Analysis, 2022

Notes: Week 47 2022 = 11/25/2022; Week 52 2021 = 12/31/2021; Elective procedures based on IQVIA custom analysis; Data includes claims from inpatient and outpatient sites of care. Trend break occurs at the beginning of 2022 as the cumulative calculations are performed on the beginning of the year period.



Reluctant patient engagement signals space for change

Economic factors can impact choice to seek care, but a new normal has arrived



Here's the inflation breakdown for December 2022 — in one chart (cnbc.com); Source: National Prescription Audit (NPA); Medical claims data, IQVIA

Notes: Channel prescriptions not normalized for Rx size. Week 39 2022 = 09/30/2022; Week 39 2021 = 10/01/2022; Health services: 5Deals 2022 midyear outlook: PwC; The Economics Daily: U.S. Bureau of Labor Statistics (bls.gov)



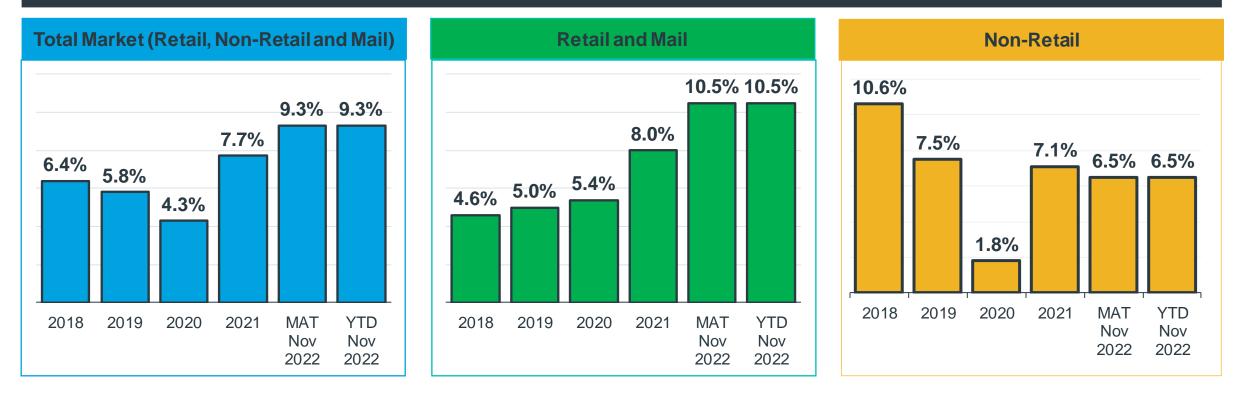


Where Are We Now?



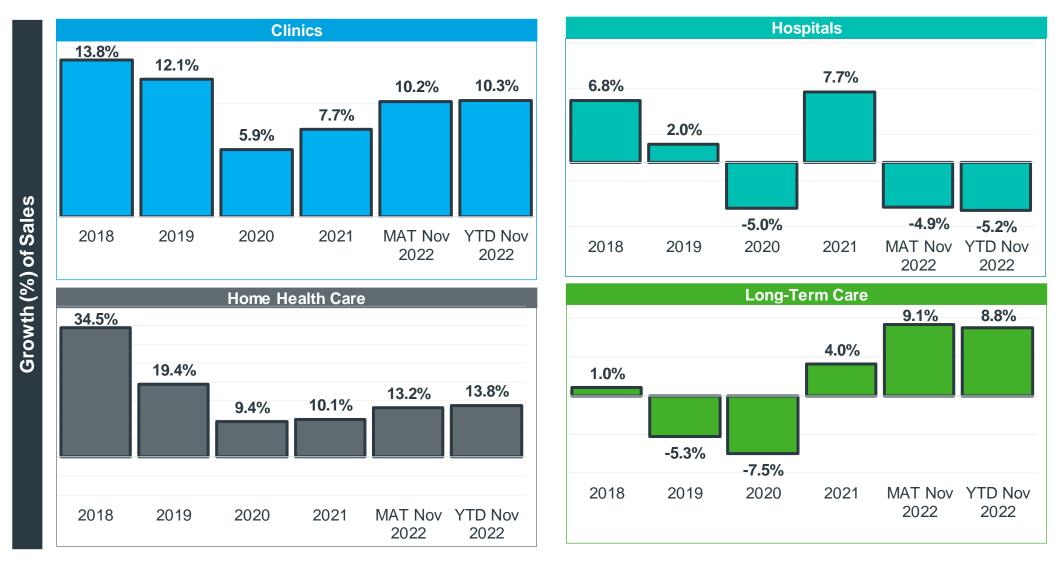
The Non-Retail channel is recovering from effects of COVID-19

Growth (%) of Sales





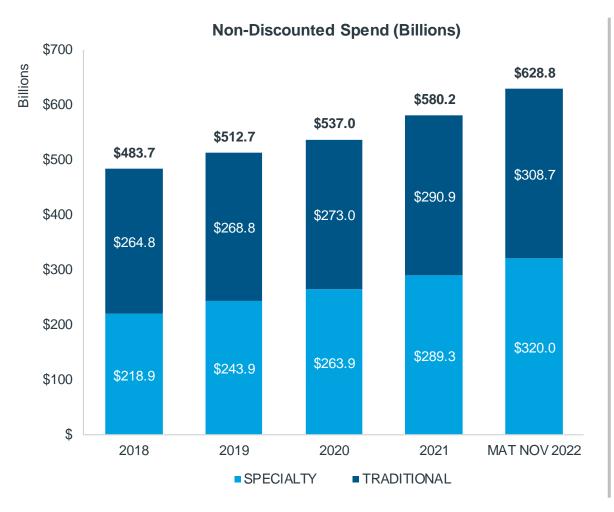
COVID-19 has affected Hospital sales more than other Non-Retail



Source: IQVIA, National Sales Perspectives, November 2022 Note: lcimited/to:Rxfanel.OTG:lasulias/includes:Retail, Non-Retail and Mail

For the total market, specialty growth outpaces traditional growth and now has ~51% share of total non-discounted spend

In MAT November 2022, specialty spend grew by 11.6% while traditional growth grew 6.9%

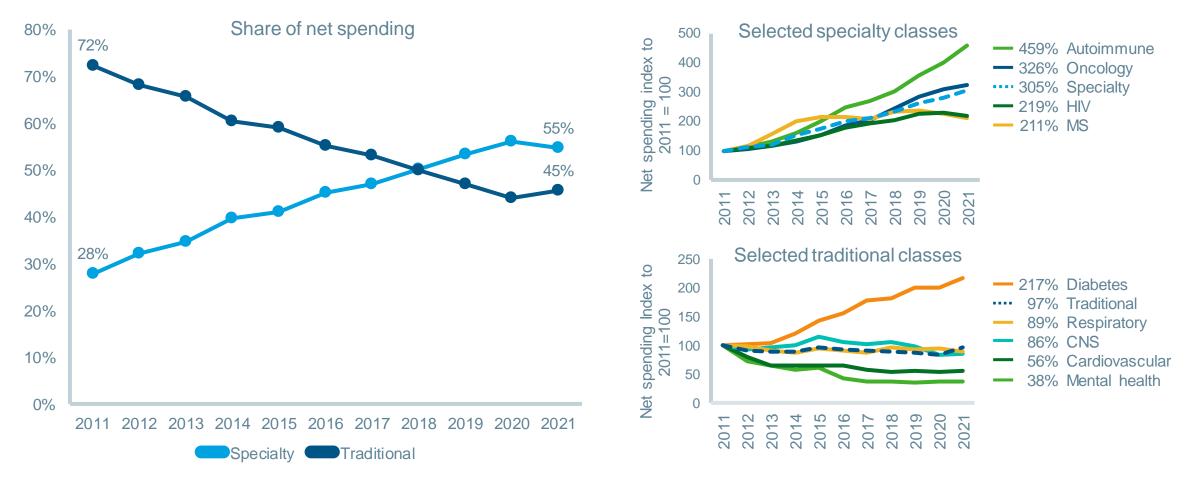




Source: IQVIA, National Sales Perspectives, November 2022 ©2022 IQVIA and Affiliates. Do not reproduce without permission.

Specialty medicines now account for 55% of net spending, up from 28% in 2011, driven by growth in auto-immune and oncology

Share of spending at estimated net manufacturer prices



Source: IQVIA Institute, Mar 2022

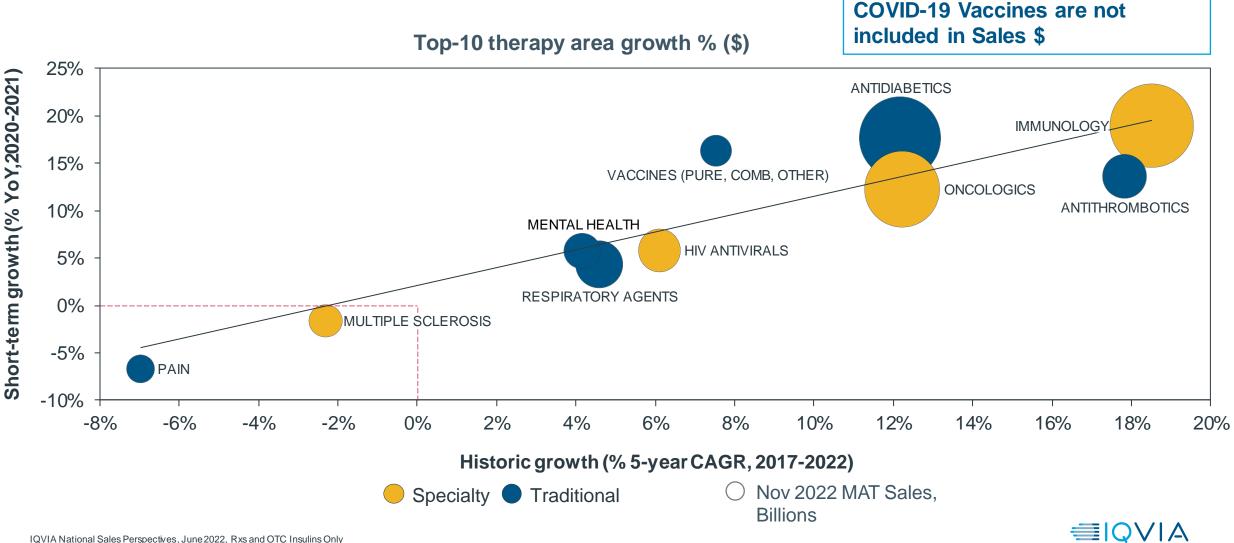
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The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2026. Report by the IQVIA Institute for Human Data Science.

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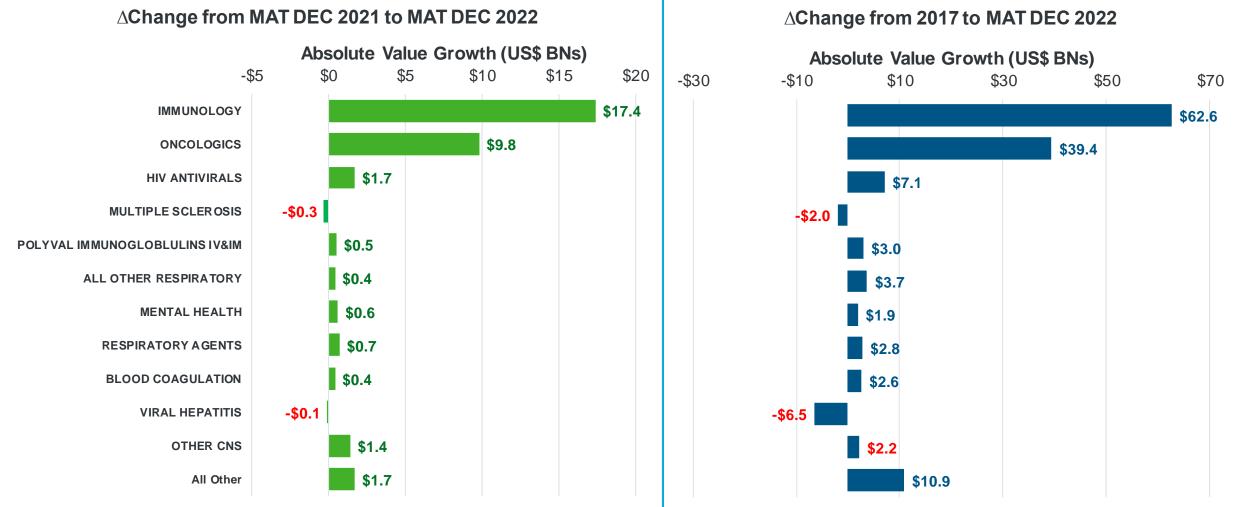
Immunology and Antithrombotics lead short and long-term growth

Slowing growth was occurring prior to COVID-19, and is not the sole contributor



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

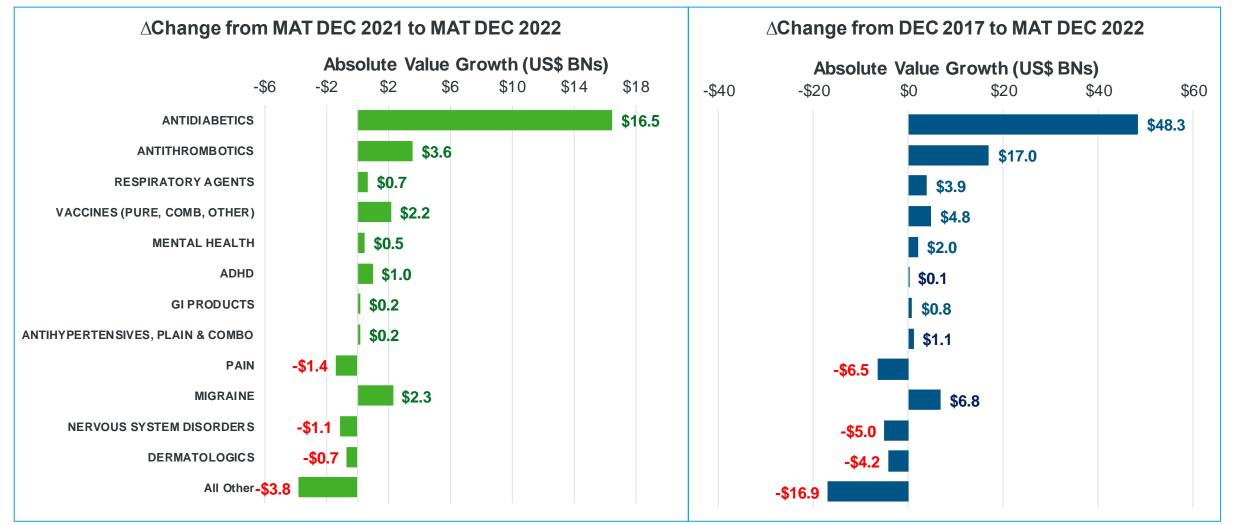




Source: IQVIA, National Sales Perspectives, December 2022 Note: top therapy areas ranked on MAT March 2022 non-discounted spend *For Client's internal use only

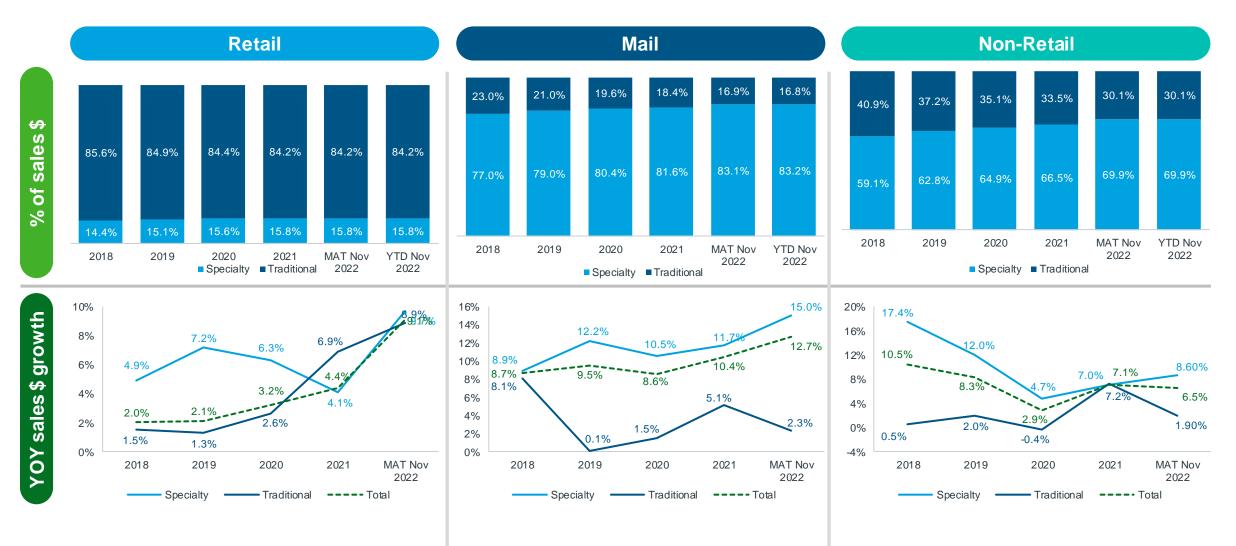
Antidiabetics and Antithrombotics lead absolute value growth for traditional therapy areas

Absolute Value Growth for Top Traditional Therapy Areas



Source: IQVIA, National Sales Perspectives, December 2022 Note: top therapy areas ranked on MAT September 2022 non-discounted spend *For Client's internal use only

Specialty sales increase in all channels over time



Data is based on Rx and OTC Insulins only

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HIV Antivirals is the largest specialty category in Retail

Top 10 Specialty Therapies for Retail, Mail, and Non-Retail MAT November 2022 (in \$ Billions)

RETAIL			
Therapy	MAT Nov 2022	YoY Growth	
HIV ANTIVIRALS	17.0	4.4%	
IMMUNOLOGY	9.5	17.8%	
MENTAL HEALTH	2.5	8.5%	
ONCOLOGICS	2.5	3.0%	
ANTI-INFLAMMATORY AND DIGESTIVE ENZYMES AND MODULA	2.3	11.3%	
LIPID REGULATORS	1.6	40.9%	
VIRAL HEPATITIS	1.3	3.8%	
OTHER CNS	0.8	51.1%	
SEX HORMONES (ANDROGENS, OESTROGENS, PROGESTOGENS)	0.7	1.4%	
MULTIPLE SCLEROSIS	0.6	-7.6%	

MAIL			
Therapy	MAT Nov 2022	YoY Growth	
IMMUNOLOGY	79.5	21.5%	
ONCOLOGICS	24.1	14.6%	
MULTIPLE SCLEROSIS	10.0	-6.3%	
HIV ANTIVIRALS	5.4	5.6%	
ALL OTHER RESPIRATORY	4.4	8.7%	
RESPIRATORY AGENTS	2.8	22.0%	
OTHER CARDIOVASCULARS	2.4	5.8%	
GROWTH HORMONES	2.4	2.8%	
BLOOD COAGULATION	2.2	10.4%	
VIRAL HEPATITIS	2.0	-5.5%	

NON-RETAIL				
Therapy	MAT Nov 2022	YoY Growth		
ONCOLOGICS	61.7	11.9%		
IMMUNOLOGY	18.4	9.6%		
MULTIPLE SCLEROSIS	6.0	9.1%		
POLYVAL IMMUNOGLOBLULINS	5.2	8.5%		
HIV ANTIVIRALS	5.2	10.9%		
HEMATOPOIETIC GROWTH FACTORS	3.1	-13.2%		
ERYTHROPOIETINS	2.6	-4.1%		
MENTAL HEALTH	2.6	16.7%		
IMMUNOSUPPRESSANTS	2.3	24.3%		
RESPIRATORY AGENTS	2.1	8.2%		

Source: IQVIA, National Sales Perspectives, 2022. Limited to Rx and OTC Insulins

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The top 10 products are growing at 26.2% and account for 22.7% market share

Rank	Product	Non-Discounted Spend (US\$ BNs)			
		MAT SEP 2022	Market Share	ABS Growth	Growth
1	HUMIRA	\$30.3	4.9%	\$4.0	15.2%
2	ELIQUIS	\$18.1	2.9%	\$3.0	20.3%
3	TRULICITY	\$15.0	2.4%	\$3.7	32.6%
4	OZEMPIC	\$13.3	2.2%	\$5.8	76.9%
5	STELARA	\$13.1	2.1%	\$3.0	29.8%
6	KEYTRUDA	\$12.1	2.0%	\$2.7	29.0%
7	BIKTARVY	\$11.0	1.8%	\$1.9	20.5%
8	JARDIANCE	\$10.8	1.7%	\$3.5	47.3%
9	ENBREL	\$8.7	1.4%	\$0.7	8.9%
10	XARELTO	\$7.9	1.3%	\$0.9	12.5%
TOP 10		\$140.1	22.7%	\$29.1	26.2%



The top 20 products are growing at 24.6% and account for 30.7% market share

Rank	Product	Non-Discounted Spend (US\$ BNs)			
		MAT SEP 2022	Market Share	ABS Growth	Growth
11	DUPIXENT	\$7.3	1.2%	\$2.2	43.7%
12	JANUVIA	\$6.4	1.0%	\$0.0	-0.1%
13	FARXIGA	\$5.1	0.8%	\$1.8	55.0%
14	OPDIVO	\$4.7	0.8%	\$0.6	15.8%
15	LANTUS SOLOSTAR	\$4.6	0.8%	-\$0.4	-8.6%
16	OCREVUS	\$4.6	0.7%	\$0.7	16.6%
17	VYVANSE	\$4.5	0.7%	\$0.5	13.4%
18	TALTZ	\$4.5	0.7%	\$0.9	26.1%
19	LATUDA	\$4.2	0.7%	\$0.2	5.7%
20	SKYRIZI	\$4.2	0.7%	\$1.9	82.3%
TOP 20		\$190.2	30.7%	\$38.5	24.6%





Generics & Biosimilars



- Total generic and biosimilar savings for 2021: \$373 billion
 - Total generic and biosimilar savings for past 10 years: more than \$2.6 trillion
 - Total generic and biosimilar savings in Medicare for 2021: \$119 billion

Total generic and biosimilar savings in commercial plans for 2021: \$178 billion

- Generics represent 91% of prescriptions filled, yet account for only 18.2% of prescription drug spending
- Of nearly 6.4 billion generic and biosimilar prescriptions dispensed, generics represent only 3% of all healthcare spending
- 93 percent of generic drugs have copays under \$20 as compared to 59% of brandname drugs
- Generics average copay is \$6.16 compared to an average out-of-pocket cost of \$56.12 for their brand counterparts
- The market for biosimilar drugs continues to expand, and they are nearly 30% of the overall biologics market

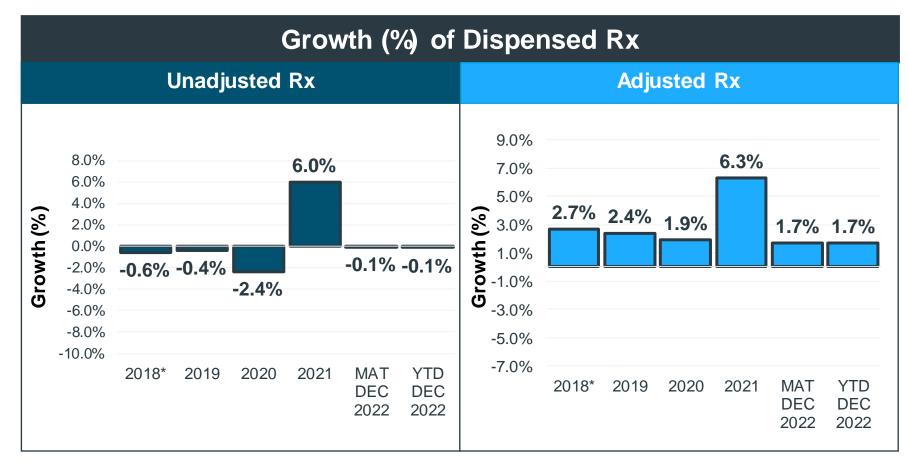
Competition from biosimilars has reduced the average sales price of their corresponding reference biologic by an average of 25%

1

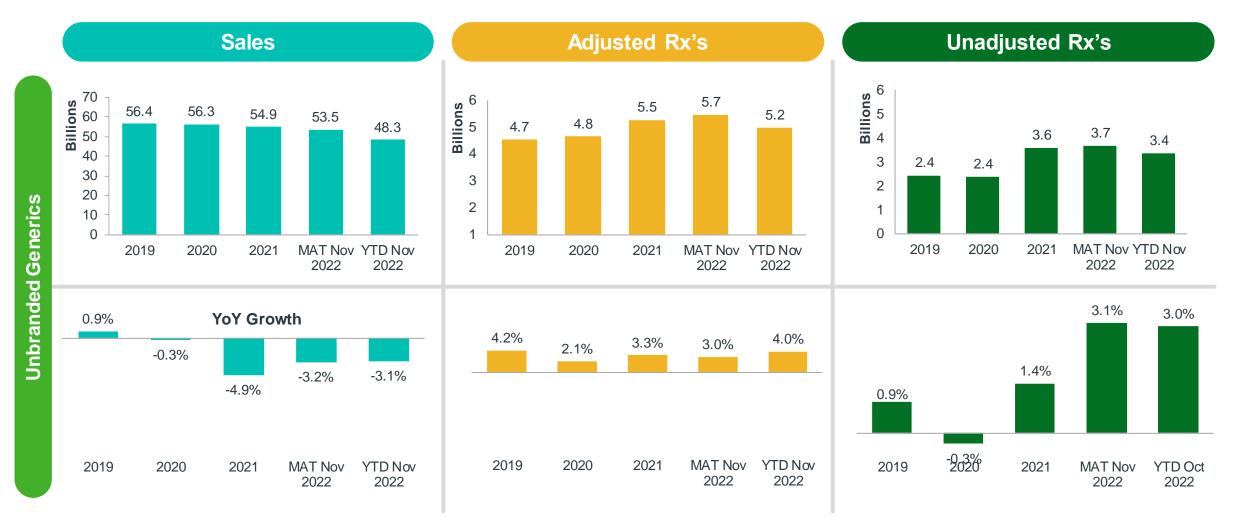


AAM Report describes Branded and Unbranded Generics as Total Generic

Unadjusted Rx growth for MAT and YTD December is negative, but Adjusted growth is higher



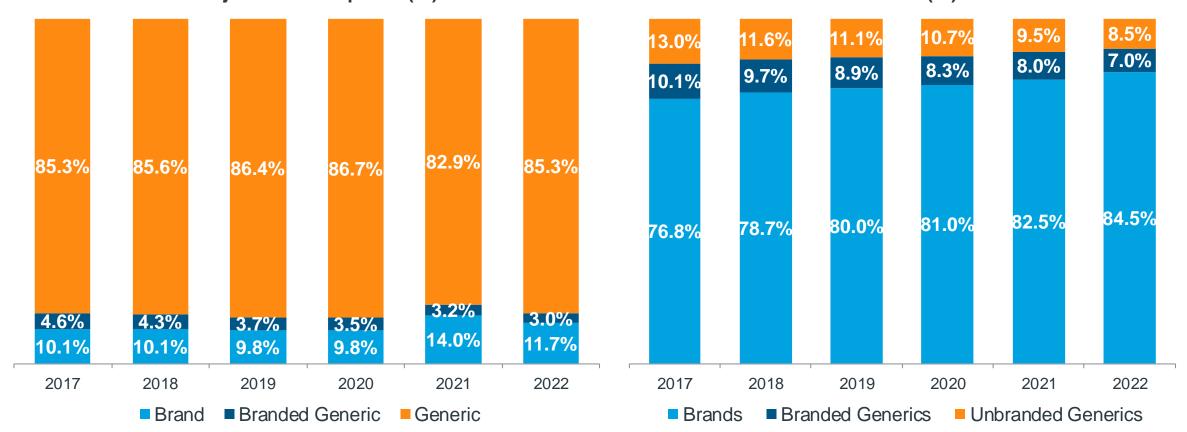
Unbranded Generics sales are negative by Rx's are positive



Source: IQVIA, National Sales Perspectives and RxInsights, 2022 Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail



85.3% of prescriptions are dispensed as unbranded generics for 2022 (unadjusted)

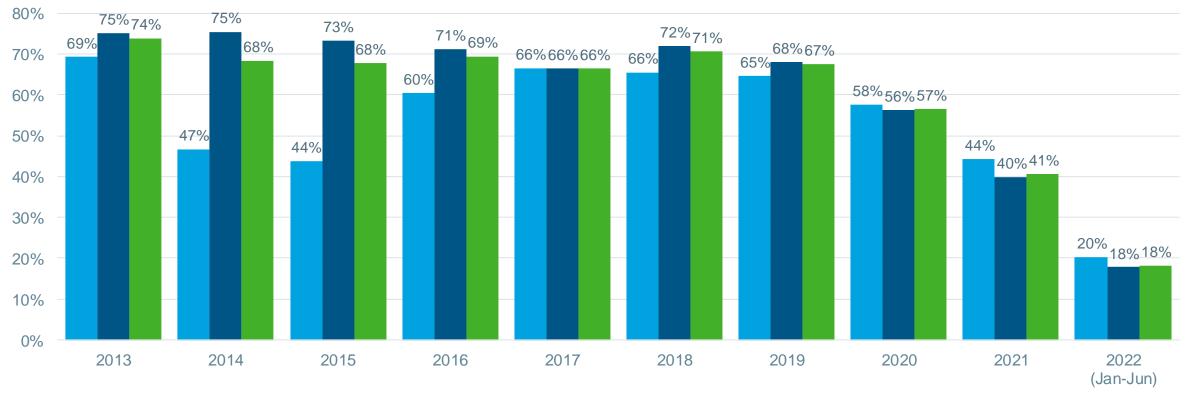


Unadjusted Prescriptions (%)

Dollars (%)

Unlaunched ANDAs account for 39% of approvals since 2013, 44% of injectables and 38% of other forms

Approved injectable ANDAs launched much less often in 2014-2016 but differences narrowed since

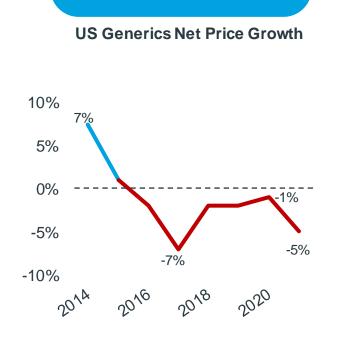


% of ANDAs launched to date by Type

Injectables Other Forms Total

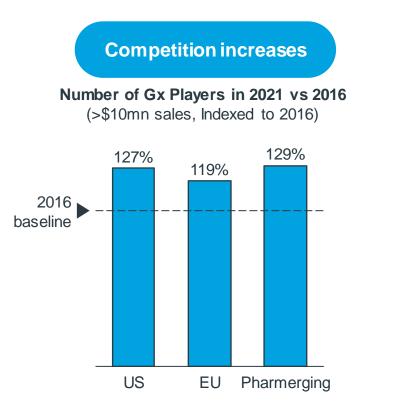


Strong forces pressure the generics macroenvironment

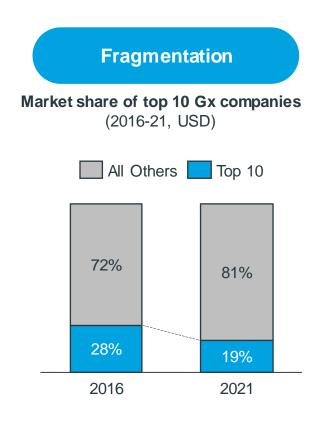


Powerful buyers

- 90% of US purchasing from top 3 wholesalers
 - WBA
 - Red Oak
 - ClarusOne



- Rapid increase in competition in the US compared to Europe
- This is driving fragmentation
- Manufacturers seek growth in Pharmerging



- Rapid rise of competition, has eroded share from top 10
- The Gx sector is increasingly fragmented

Notes: Generic companies with sales over \$10mn used to calculate crowding; Developed countries defined as US, EU4 + UK and Japan. Excluded TAs = hospital solutions, Kanpo and Chinese, imaging agents, Diagnostics, vaccines, non-therapeutic agents

Source: IQVIA EMEA Thought Leadership; IQVIA MIDAS MAT Q4 2021; Rx only; Innovation insights; IQVIA Institute General US Medicines Spending Outlook 2018-2023



Total market Orals, Solid dollar share is declining, while injectables and systemics share is growing

			Brands
Formulation	2017 Share	MAT JUN 2022 Share	
DERMATOLOGICALS	2.4%	1.1%	,
INHALANTS	3.9%	3.9%	
INJECTABLES	35.9%	43.8%	
ORALS, SOLID	43.9%	38.8%	
OTHER	8.1%	5.4%	Generics
SYSTEMICS	5.7%	7.0%	

Formulation	2017 Share	MAT JUN 2022 Share
DERMATOLOGICALS	0.7%	0.3%
INHALANTS	3.8%	3.8%
INJECTABLES	40.7%	47.0%
ORALS, SOLID	43.5%	39.0%
OTHER	4.5%	2.0%
SYSTEMICS	6.9%	7.9%

Formulation	2017 Share	MAT JUN 2022 Share
DERMATOLOGICALS	7.5%	4.4%
INHALANTS	2.1%	6.0%
INJECTABLES	16.7%	24.0%
ORALS, SOLID	62.9%	51.4%
OTHER	10.0%	12.9%
SYSTEMICS	0.8%	1.4%



Orals, Solid account for 86.6% of total market adjusted scripts and 92.1% of unbranded generic adjusted scripts for MAT DEC 2022

			Brands
Formulation	2015 Share	MAT DEC 2022 Share	
DERMATOLOGICALS	2.1%	2.1%	
INHALANTS	2.1%	2.2%	
INJECTABLES	2.6%	4.9%	
ORALS, SOLID	88.3%	86.6%	Conorioo
OTHER	4.6%	3.9%	Generics
SYSTEMICS	0.2%	0.4%	

>1% difference

<-1% difference

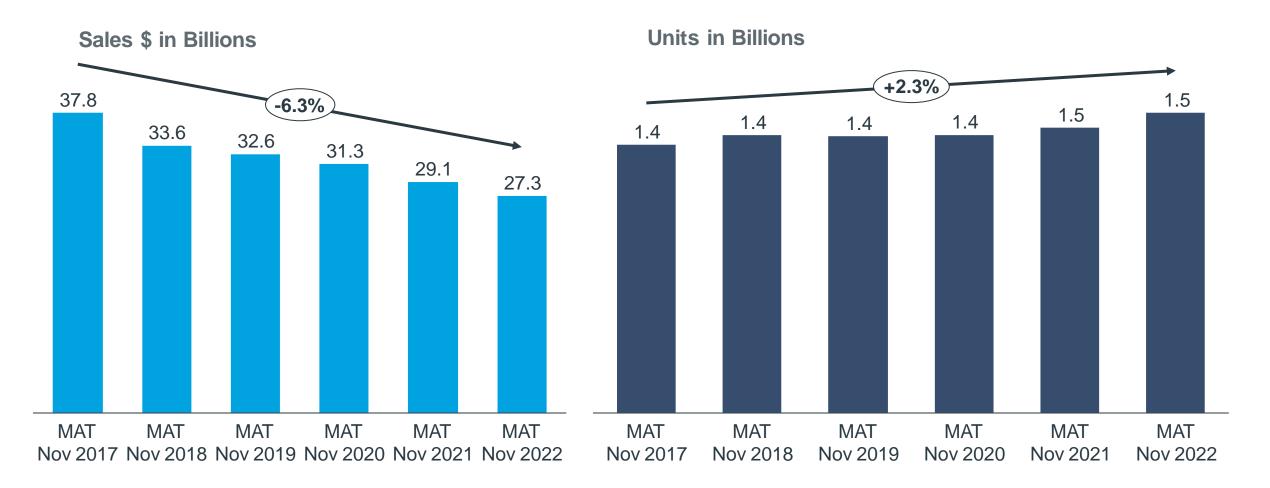
Formulation	2015 Share	MAT DEC 2022 Share
DERMATOLOGICALS	1.7%	0.5%
INHALANTS	8.6%	8.3%
INJECTABLES	17.0%	42.5%
ORALS, SOLID	60.5%	42.8%
OTHER	11.5%	3.7%
SYSTEMICS	0.8%	2.2%

Formulation	2015 Share	MAT DEC 2022 Share
DERMATOLOGICALS	2.1%	2.2%
INHALANTS	0.5%	1.4%
INJECTABLES	0.6%	0.7%
ORALS, SOLID	93.5%	92.1%
OTHER	3.1%	3.4%
SYSTEMICS	0.1%	0.2%

Total Markot

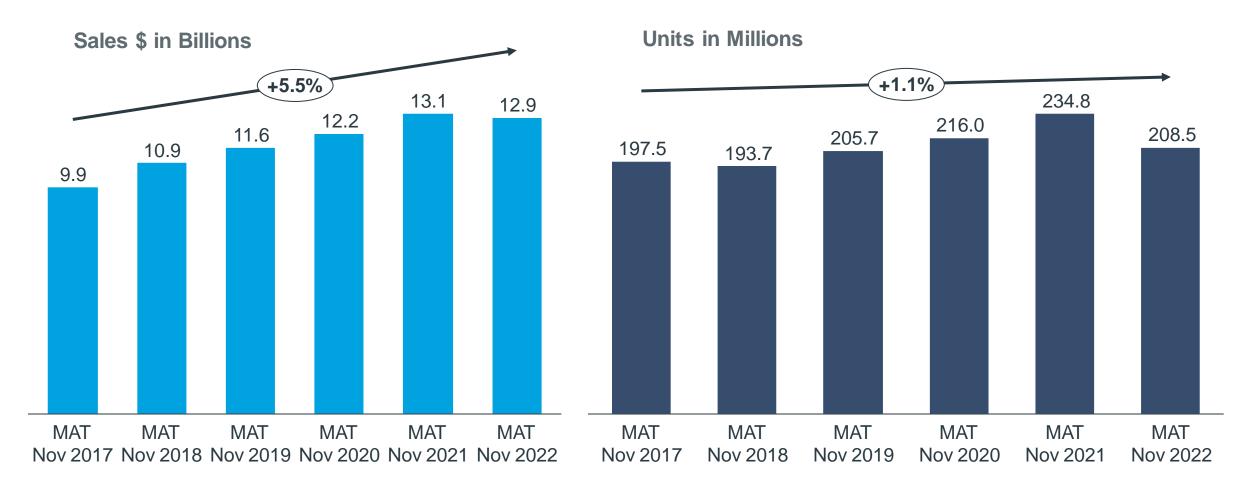


Unbranded Generic Oral Solids CAGR sales decrease while units increase

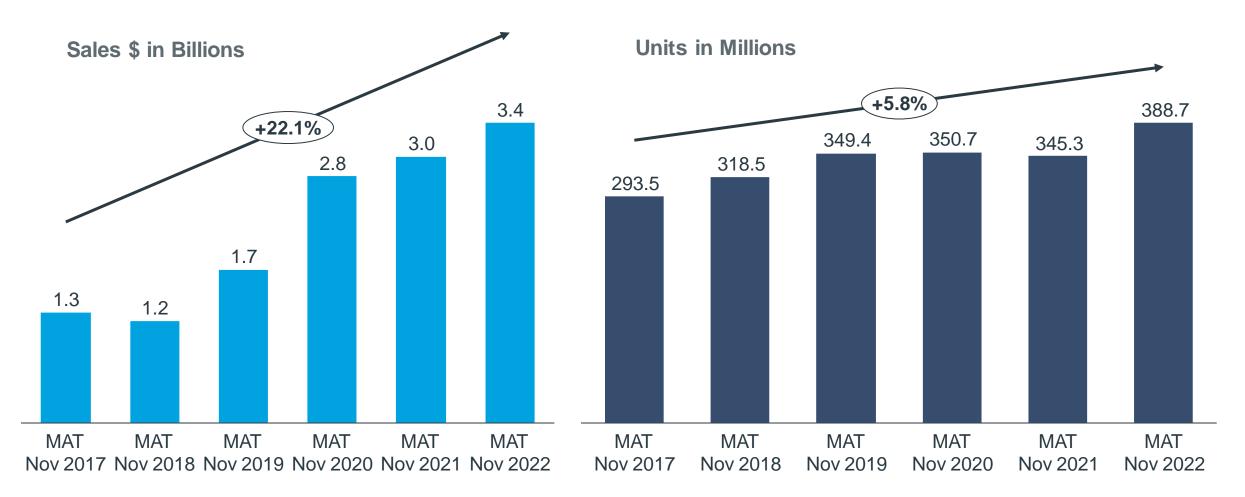


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Unbranded Generic Injectables CAGR sales and units increase

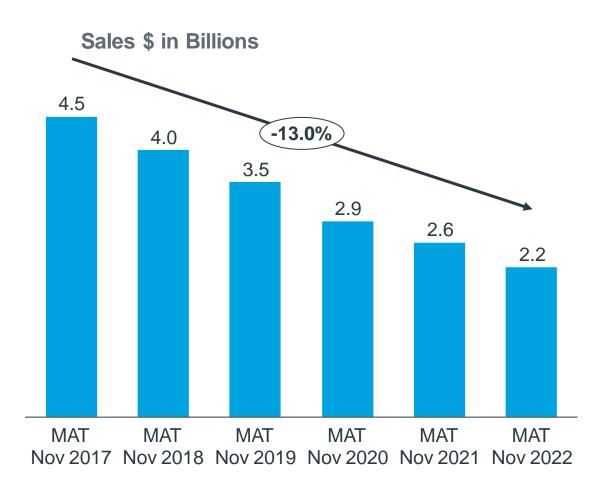


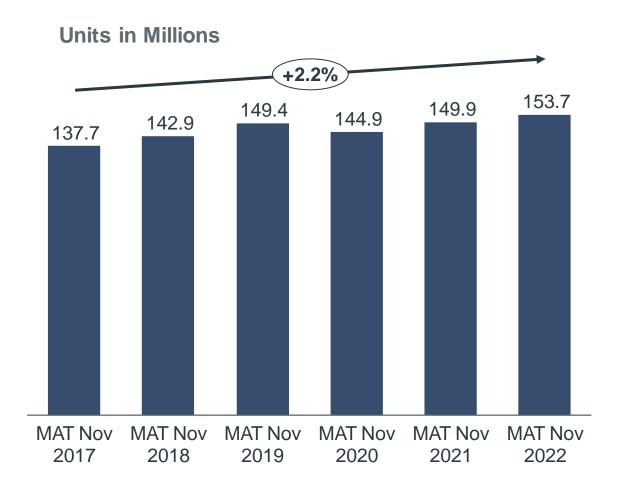
Unbranded Generic Inhalants CAGR sales and units increase





Unbranded Generic Dermatological CAGR Sales decrease while units increase



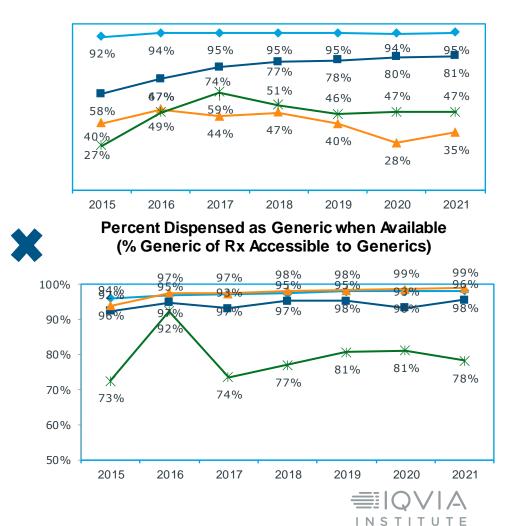


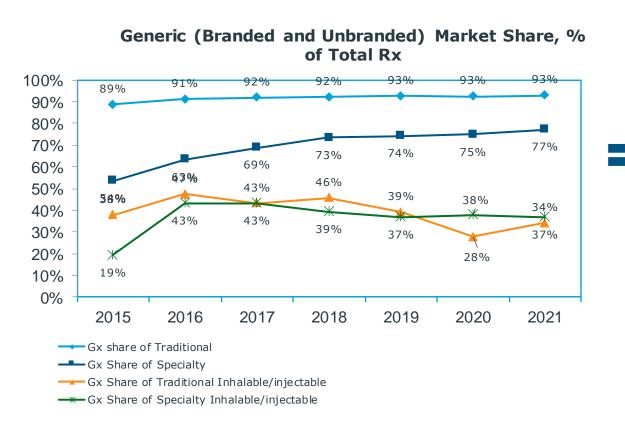
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Generic efficiency rate broken down: traditional, specialty, inhalable/injectable, specialty injectable

Generic shares of dispensed prescriptions

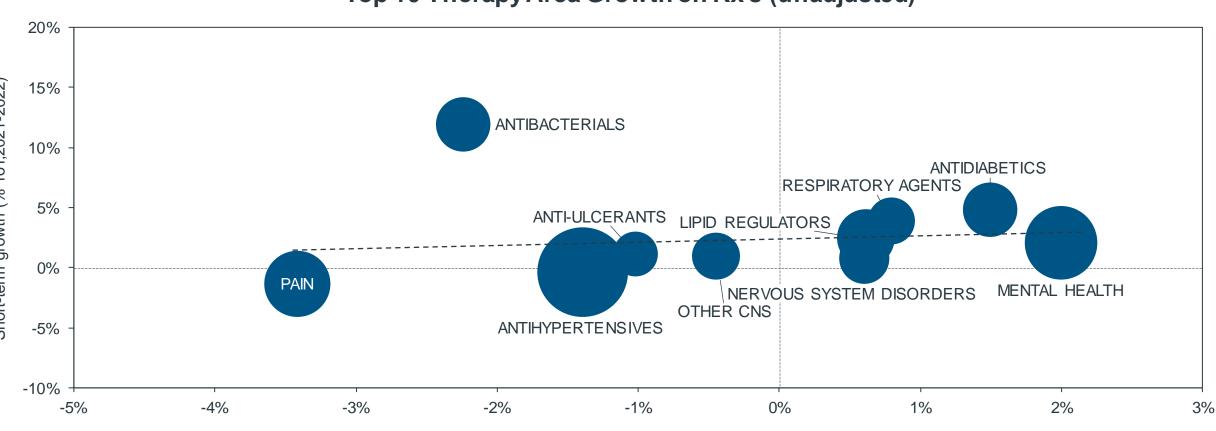
Percent of Market Accessible to Generics, % of Total Rx by Segment





Source: IQVIA, National Sales Perspectives, Dec 2021

On Rx's, Mental Health shows greatest 5-year growth; Antibacterials shows greatest year-over-year growth



Top 10 Therapy Area Growth on Rx's (unadjusted)

Historic growth (% 5-year CAGR, 2017-2022)



On a script basis, the top 10 therapy areas are growing at 3.2% adjusted and at 1.9% unadjusted

			Adjusted	Scripts (MNs)		Unadjusted Scripts (MNs)			
Rank	Therapy Area	MAT DEC 2022	Market Share	ABS Growth	Growth	MAT DEC 2022	Market Share	ABS Growth	Growth
1	ANTIHYPERTENSIVES, PLAIN & COMBO	1,288.6	19.8%	22.3	1.8%	634.2	14.6%	-2.4	-0.4%
2	MENTAL HEALTH	632.9	9.7%	25.1	4.1%	420.1	9.7%	8.4	2.0%
3	LIPID REGULATORS	556.1	8.5%	25.2	4.8%	257.4	5.9%	6.1	2.4%
4	ANTIDIABETICS	403.9	6.2%	23.5	6.2%	230.5	5.3%	11.4	5.2%
5	PAIN	378.1	5.8%	-3.8	-1.0%	343.6	7.9%	-4.6	-1.3%
6	ANTI-ULCERANTS	273.1	4.2%	10.0	3.8%	154.8	3.6%	1.7	1.1%
7	NERVOUSSYSTEMDISORDERS	265.8	4.1%	4.9	1.9%	199.1	4.6%	1.5	0.8%
8	ANTIBACTERIALS	233.4	3.6%	24.7	11.8%	229.7	5.3%	24.5	12.0%
9	THYROID ANTI-THYROID AND IODINE PREPS	231.7	3.6%	1.3	0.5%	115.4	2.7%	-2.6	-2.2%
10	RESPIRATORY AGENTS	225.7	3.5%	7.5	3.5%	177.1	4.1%	6.6	3.9%
TOP 10)	4,489.3	68.9%	140.8	3.2%	2,762.0	63.8%	50.6	1.9%



On a script basis, the top 20 therapy areas are growing at 0.8% adjusted and declining at 1.4% unadjusted

		Adjusted Scripts (MNs)				Unadjusted Scripts (MNs)			
Rank	Therapy Area	MAT DEC 2022	Market Share	ABS Growt	h Growth	MAT DEC 2022	Market Share	ABS Growth Grow	
11	OTHER CNS	194.4	3.0%	3.3	1.7%	174.2	4.0%	1.7	1.0%
12	VACCINES (PURE, COMB, OTHER)	156.7	2.4%	-117.6	-42.9%	155.2	3.6%	-119.0	-43.4%
13	DERMATOLOGICS	127.5	2.0%	4.7	3.9%	121.8	2.8%	4.2	3.6%
14	ANTITHROMBOTICS	123.5	1.9%	1.3	1.1%	73.1	1.7%	-0.2	-0.3%
15	ADHD	120.0	1.8%	8.1	7.3%	108.7	2.5%	7.3	7.2%
16	HORMONAL CONTRACEPTION, SYSTEMIC&TOPICAL	117.3	1.8%	-7.6	-6.1%	61.4	1.4%	-5.7	-8.5%
17	VITAMINS & MINERALS	105.8	1.6%	-3.0	-2.7%	62.4	1.4%	-3.3	-5.1%
18	BPH (BENIGN PROSTATIC HYPERTROPHY)	93.4	1.4%	4.9	5.5%	46.0	1.1%	1.4	3.1%
19	CORTICOSTEROIDS, PLAIN & COMBO	83.9	1.3%	8.0	10.6%	78.3	1.8%	7.9	11.3%
20	GI PRODUCTS	68.7	1.1%	3.1	4.7%	58.5	1.4%	2.2	4.0%
TOP 20)	5,680.5	87.2%	46.0	0.8%	3,701.5	85.5%	-52.8	-1.4%

86.9% scripts for the top 10 therapy areas are dispensed as unbranded generics

		MAT Decer	nber 2022 L	INADJUSTED	SHARE(%)			
Rank	Therapy Area	TOTAL RXs	BRAND	BRANDED GENERIC	UNBRANDED GENERIC	BRAND	BRANDED GENERIC	UNBRANDED GENERIC
1	ANTIHYPERTENSIVES, PLAIN & COMBO	634.2	6.3	1.4	626.5	1.0%	0.2%	98.8%
2	MENTAL HEALTH	420.1	12.9	0.1	407.1	3.1%	0.0%	96.9%
3	PAIN	343.6	2.4	2.9	338.4	0.7%	0.8%	98.5%
4	LIPID REGULATORS	257.4	3.9	0.2	253.3	1.5%	0.1%	98.4%
5	ANTIDIABETICS	230.0	109.4	1.5	119.1	47.6%	0.6%	51.8%
6	ANTIBACTERIALS	229.7	0.1	0.4	229.2	0.1%	0.2%	99.8%
7	NERVOUSSYSTEMDISORDERS	199.1	3.6	1.3	194.3	1.8%	0.7%	97.5%
8	RESPIRATORY AGENTS	177.1	52.3	9.4	115.3	29.5%	5.3%	65.1%
9	OTHER CNS	174.2	5.9	1.2	167.0	3.4%	0.7%	95.9%
10	VACCINES (PURE, COMB, OTHER)	155.2	155.2	0.0	0.0	100.0%	0.0%	0.0%
TOP 10)	2,820.6	352.0	18.4	2,450.2	12.5%	0.7%	86.9%



85.4% scripts for the top 20 therapy areas are dispensed as unbranded generics

		MAT Decer	nber 2022 l	JNADJUSTED	SHARE(%)			
Rank	Therapy Area	TOTAL RXs	BRAND	BRANDED GENERIC	UNBRANDED GENERIC	BRAND	BRANDED GENERIC	UNBRANDED GENERIC
11	ANTI-ULCERANTS	154.8	1.6	0.1	153.1	1.1%	0.1%	98.9%
12	DERMATOLOGICS	121.8	3.5	6.8	111.5	2.9%	5.6%	91.6%
13	THYROID ANTI-THYROID AND IODINE PREPS	115.4	12.9	9.7	92.8	11.2%	8.4%	80.4%
14	ADHD	108.7	14.1	10.2	84.3	13.0%	9.4%	77.6%
15	CORTICOSTEROIDS, PLAIN & COMBO	78.3	0.1	0.1	78.1	0.2%	0.1%	99.7%
16	ANTITHROMBOTICS	73.1	40.8	0.8	31.4	55.9%	1.1%	43.0%
17	VITAMINS & MINERALS	62.4	0.0	5.7	56.8	0.0%	9.1%	90.9%
18	HORMONAL CONTRACEPTION, SYSTEMIC&TOPICAL	61.4	4.3	43.2	13.9	6.9%	70.4%	22.7%
19	GI PRODUCTS	58.5	6.6	8.3	43.6	11.3%	14.2%	74.5%
20	BPH (BENIGN PROSTATIC HYPERTROPHY)	46.0	0.0	0.0	45.9	0.1%	0.0%	99.9%
TOP 20		3,701.0	436.0	103.3	3,161.6	11.8%	2.8%	85.4%



Pain has the highest annual branded generic and generic share of spend for the top 10 therapy areas

	, THERAPY AREA			2017		MAT December 2022			
RANK*		BRAND	BRANDED GENERIC	UNBRANDED GENERIC	TOTAL\$ (BNs)	BRAND	BRANDED GENERIC	UNBRANDED GENERIC	TOTAL\$ (BNs)
1	IMMUNOLOGY	99.7%	0.2%	0.1%	10.3%	99.8%	0.2%	0.1%	17.2%
2	ANTIDIABETICS	95.7%	3.3%	1.0%	11.9%	96.6%	2.2%	1.3%	16.2%
3	ONCOLOGICS	94.1%	5.2%	0.7%	11.0%	96.6%	2.8%	0.6%	14.1%
4	RESPIRATORY AGENTS	84.4%	5.3%	10.2%	5.9%	84.6%	11.2%	4.2%	5.3%
5	ANTITHROMBOTICS	92.6%	7.1%	0.3%	3.0%	98.0%	1.9%	0.1%	4.8%
6	HIV ANTIVIRALS	99.3%	0.7%	0.0%	4.5%	99.4%	0.6%	0.0%	4.4%
7	MENTAL HEALTH	71.4%	27.9%	0.7%	3.5%	86.2%	12.5%	1.3%	3.1%
8	MULTIPLE SCLEROSIS	91.9%	0.3%	7.7%	4.1%	89.6%	2.5%	7.9%	2.6%
9	VACCINES (PURE, COMB, OTHER)	100.0%	0.0%	0.0%	2.3%	100.0%	0.0%	0.0%	2.4%
10	PAIN	30.4%	36.3%	33.3%	3.5%	27.7%	37.3%	35.0%	1.7%

Source: IQVIA, National Sales Perspectives, December 2022

Note: Unbranded Generic includes "Other" category

*: Ranked on MAT December 2022\$ Limited to Rx and OTC Insulins

*For Client's internal use only



On a script basis, the top 10 products are growing at 3.8% adjusted and growing at 1.4% unadjusted

		Adjusted Scripts (MNs)				Unadjusted Scripts (MNs)			
Rank	Product	MAT DEC 2022	Market Share	ABS Growth	Growth	MAT DEC 2022	Market Share	ABS Growth	Growth
1	ATORVASTATINCA	274.8	4.2%	14.0	5.4%	128.9	3.0%	3.6	2.9%
2	AMLODIPINE BESY	189.1	2.9%	6.8	3.7%	91.1	2.1%	1.0	1.2%
3	LISINOPRIL	176.7	2.7%	-3.1	-1.7%	84.6	2.0%	-3.8	-4.3%
4	LEVOTHYROXINE SOD	166.7	2.6%	3.7	2.2%	83.2	1.9%	-0.2	-0.2%
5	LOSARTAN POT	132.3	2.0%	6.9	5.5%	62.4	1.4%	2.3	3.8%
6	METFORMIN HCL	114.3	1.8%	-0.3	-0.3%	56.6	1.3%	-1.6	-2.8%
7	METOPROLOL SUCCIN	110.3	1.7%	5.6	5.3%	52.4	1.2%	1.6	3.1%
8	ROSUVASTATINCAL	104.3	1.6%	17.2	19.7%	46.9	1.1%	6.8	16.9%
9	GABAPENTIN	97.2	1.5%	2.8	3.0%	72.2	1.7%	1.5	2.2%
10	HYDROCHLOROTHIAZIDE	95.0	1.5%	-0.4	-0.4%	44.1	1.0%	-1.5	-3.3%
TOP 10 1,40		1,460.7	22.4%	53.1	3.8%	722.4	16.7%	9.7	1.4%



On a script basis, the top 20 products are declining at 0.6% adjusted and at 5.4% unadjusted

		A	djusted Scr	ipts (MNs)		Unadjusted Scripts (MNs)			
Rank	Product	MAT DEC 2022	Market Share	ABS Growth	Growth	MAT DEC 2022	Market Share	ABS Growth	Growth
11	SERTRALINE HCL	87.6	1.3%	4.2	5.0%	55.0	1.3%	1.4	2.6%
12	OMEPRAZOLE (RX)	85.6	1.3%	-11.1	-11.5%	46.9	1.1%	-7.3	-13.5%
13	PANTOPRAZOLESOD	83.9	1.3%	5.2	6.6%	47.2	1.1%	1.7	3.8%
14	ESCITALOPRAM OXAL	76.5	1.2%	5.4	7.6%	46.9	1.1%	2.0	4.5%
15	MONTELUKAST SOD	65.3	1.0%	0.5	0.8%	36.0	0.8%	-0.9	-2.5%
16	SIMVASTATIN	63.8	1.0%	-6.3	-8.9%	27.9	0.6%	-3.4	-10.8%
17	FUROSEMIDE	62.7	1.0%	-1.0	-1.6%	36.1	0.8%	-1.1	-3.0%
18	TAMSULOSINHCL	60.7	0.9%	3.7	6.5%	30.8	0.7%	1.1	3.9%
19	TRAZODONE HCL	60.6	0.9%	3.2	5.6%	40.6	0.9%	1.3	3.4%
20	COMIRNATY	58.8	0.9%	-70.0	-54.3%	58.8	1.4%	-70.0	-54.4%
TOP 20)	2,166.0	33.3%	-13.1	-0.6%	1,148.6	26.5%	-65.4	-5.4%



On an unadjusted script basis, the top 10 corporations' growth is 2.1% and account for 40.7% market share

Rank	Corporation		Unadjusted Scripts	(MNs)	
Ralik	Corporation	MAT DEC 2022	Market Share	ABS Growth	Growth
1	TEVA PHARM USA	316.0	7.3%	4.0	1.3%
2	AUROBINDO PHARM	305.9	7.1%	-5.8	-1.9%
3	LUPIN	233.9	5.4%	9.6	4.3%
4	AMNEAL INC	166.4	3.8%	7.7	4.8%
5	ZYDUSPHARM	148.3	3.4%	0.1	0.0%
6	VIATRIS INC.	140.2	3.2%	-14.6	-9.4%
7	ACCORD HLTHCRE INC	132.7	3.1%	10.5	8.6%
8	CAMBER	111.4	2.6%	17.8	19.0%
9	ASCENDLABS	103.9	2.4%	4.7	4.7%
10	SANDOZ	103.0	2.4%	2.7	2.7%
TOP 10		1,761.7	40.7%	36.5	2.1%



On an unadjusted script basis, the top 20 corporations' growth is declining at 0.6% and account for 60.9% market share

Pank	Corporation		Unadjusted Scripts	(MNs)	
Rank	Corporation	MAT DEC 2022	Market Share	ABS Growth	Growth
11	SUN PHARMA	101.7	2.3%	2.2	2.2%
12	DR REDDY INC	100.5	2.3%	-0.4	-0.4%
13	CIPLA USA, INC.	95.0	2.2%	0.0	0.0%
14	APOTEX CORP	89.4	2.1%	-4.3	-4.6%
15	GLENMARK PHARMA	88.7	2.0%	7.8	9.7%
16	NORTHSTAR RX	88.4	2.0%	-1.8	-2.0%
17	HIKMA PHARM	86.2	2.0%	-3.4	-3.8%
18	RISING	81.7	1.9%	6.5	8.7%
19	PFIZER	77.1	1.8%	-61.9	-44.5%
20	TORRENT PHARM	69.2	1.6%	2.4	3.5%
TOP 20		2,639.7	60.9%	-16.4	-0.6%



Camber has the highest absolute growth in total market unbranded generic corporation unadjusted Rx's

Top 10 Unbranded Generic Corporations by Absolute Growth MAT December 2022 (Unadj. Rx's in Millions)

	Unbranded Generic Corporatio	Unbranded Generic Corporations								
Rank	Corporation	MAT Dec 2022 Unadj. Rx	Absolute Growth Unadj. Rx							
1	CAMBER	111.4	17.8							
2	ALEMBIC PHARM	33.5	12.9							
3	ACCORD HLTHCRE INC	132.4	10.2							
4	GRANULES PHARMA	37.2	9.5							
5	PURACAP PHARMA	35.7	9.5							
6	AMNEAL INC	162.2	8.5							
7	LUPIN	226.4	8.5							
8	XIROMED LLC	13.0	8.3							
9	TEVA PHARM USA	292.4	7.9							
10	GLENMARK PHARMA	86.0	7.3							

Source: IQVIA, National Sales Perspectives, 2022



The top 10 generic products are declining at 1.7% and account for 1.3% market share on a non discounted spend basis

			Non-Disc	ounted Spend (US	BNs)	
Rank	Product	MAT DEC 2022	Market Share	Generic Market Share	ABS Growth	Growth
1	ALBUTEROLHFA	\$1.3	0.2%	2.5%	-\$0.1	-5.7%
2	EPINEPHRINE	\$1.2	0.2%	2.2%	-\$0.1	-9.4%
3	GAMUNEX-C	\$1.1	0.2%	2.0%	\$0.0	-2.1%
4	SOFOSBUVIR/VELPATA	\$0.8	0.1%	1.5%	\$0.1	16.0%
5	LEVOTHYROXINE SOD	\$0.7	0.1%	1.4%	-\$0.1	-10.8%
6	MESALAMINE	\$0.7	0.1%	1.3%	\$0.0	-5.9%
7	BUPRENORPHIN/NALOX	\$0.6	0.1%	1.2%	\$0.0	-6.8%
8	BUDESONID/FORMOTER	\$0.6	0.1%	1.2%	\$0.0	-6.0%
9	ATORVASTATIN CA	\$0.6	0.1%	1.1%	\$0.2	42.9%
10	ENOXAPARIN SOD	\$0.5	0.1%	1.0%	\$0.0	2.6%
TOP 10)	\$8.3	1.3%	15.4%	-\$0.1	-1.7%



The top 20 generic products are growing at 10.5% and account for 1.9% market share

Rank	Product	MAT DEC 2022	Market Share	Generic	ABS Growth	Growth
			MarkerShare	Market Share	ADS GIUWIII	Growin
11	VARENICLINETART	\$0.5	0.1%	0.9%	\$0.3	200.1%
12	SOD CHLORIDE	\$0.4	0.1%	0.8%	\$0.1	26.1%
13	LENALIDOMIDE	\$0.4	0.1%	0.8%	\$0.0	0.0%
14	GABAPENTIN	\$0.3	0.1%	0.7%	\$0.0	-7.1%
15	INSULIN ASPART	\$0.3	0.1%	0.7%	\$0.1	48.4%
16	BUDESONIDE	\$0.3	0.1%	0.6%	\$0.0	13.7%
17	DEXLANSOPRAZOLE	\$0.3	0.1%	0.6%	\$0.0	0.0%
18	FLUTICASONE PROP/SAL	\$0.3	0.1%	0.6%	-\$0.1	-14.6%
19	LOSARTAN POT	\$0.3	0.1%	0.6%	\$0.1	41.3%
20	METOPROLOL SUCCIN	\$0.3	0.1%	0.6%	-\$0.1	-15.3%
TOP 20)	\$12.0	1.9%	22.3%	\$0.4	10.5%



The top 10 therapy areas have 3.6% share of unbranded generic sales

		MAT DEC 2022	2 NON-DI	SCOUNTEDS	SPEND (\$BNS)	SHARE (%)			
Rank	Therapy Area	TOTALSPEND	BRAND	BRANDED GENERIC	UNBRANDED GENERIC	BRAND	BRANDED GENERIC	UNBRANDED GENERIC	
1	IMMUNOLOGY	\$109.3	\$109.0	\$0.1	\$0.2	99.8%	0.1%	0.2%	
2	ANTIDIABETICS	\$102.5	\$99.1	\$1.3	\$2.2	96.6%	1.3%	2.2%	
3	ONCOLOGICS	\$89.5	\$86.5	\$0.5	\$2.5	96.6%	0.6%	2.8%	
4	RESPIRATORY AGENTS	\$33.6	\$28.4	\$1.4	\$3.8	84.6%	4.2%	11.2%	
5	ANTITHROMBOTICS	\$30.5	\$29.9	\$0.0	\$0.6	98.0%	0.1%	1.9%	
6	HIV ANTIVIRALS	\$27.7	\$27.5	\$0.0	\$0.2	99.4%	0.0%	0.6%	
7	MENTAL HEALTH	\$19.8	\$17.0	\$0.3	\$2.5	86.2%	1.3%	12.5%	
8	MULTIPLE SCLEROSIS	\$16.6	\$14.8	\$1.3	\$0.4	89.6%	7.9%	2.5%	
9	VACCINES (PURE, COMB, OTHER)	\$15.3	\$15.3	\$0.0	\$0.0	100.0%	0.0%	0.0%	
10	PAIN	\$10.8	\$3.0	\$3.8	\$4.0	27.7%	35.0%	37.3%	
TOP 10)	\$455.6	\$430.6	\$8.7	\$16.3	94.5%	1.9%	3.6%	

Source: IQVIA, National Sales Perspectives, December 2022 Note: Unbranded Generic includes "Other" category Limited to Rx and OTC Insulins

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The top 20 therapy areas have 6.5% share of unbranded generic sales

		MAT DEC 202	2 NON-DI	SCOUNTEDS	PEND (\$BNS)	SHARE(%)		
Rank	Therapy Area	TOTALSPEND	BRAND	BRANDED GENERIC	UNBRANDED GENERIC	BRAND	BRANDED GENERIC	UNBRANDED GENERIC
11	ADHD	\$10.1	\$5.3	\$3.3	\$1.4	52.8%	33.3%	14.0%
12	GIPRODUCTS	\$9.4	\$6.6	\$1.1	\$1.8	70.1%	11.2%	18.7%
13	OTHER CNS	\$8.9	\$5.9	\$0.7	\$2.2	66.5%	8.3%	25.2%
14	ANTIHYPERTENSIVES, PLAIN & COMBO	\$8.9	\$5.1	\$0.1	\$3.6	57.6%	1.4%	41.1%
15	OTHER CARDIOVASCULARS	\$8.4	\$5.1	\$0.7	\$2.6	60.9%	8.4%	30.7%
16	NERVOUSSYSTEMDISORDERS	\$8.4	\$4.9	\$1.4	\$2.1	58.0%	16.5%	25.5%
17	MIGRAINE	\$8.1	\$7.7	\$0.1	\$0.3	95.4%	0.8%	3.8%
18	DERMATOLOGICS	\$6.2	\$2.0	\$1.9	\$2.2	33.1%	31.2%	35.8%
19	POLYVAL IMMUNOGLOBLULINS IV&IM	\$5.9	\$.1	\$4.8	\$1.1	1.4%	80.2%	18.4%
20	OPHTHALMOLOGY, GENERAL	\$5.8	\$1.3	\$3.3	\$1.2	22.4%	57.0%	20.7%
TOP 20		\$535.6	\$474.6	\$26.1	\$34.9	88.6%	4.9%	6.5%

Source: IQVIA, National Sales Perspectives, December 2022 Note: Unbranded Generic includes "Other" category Limited to Rx and OTC Insulins *For Client's internal use only

The top 10 generic corporations* are declining at 4.5% and account for 41.0% generic market share

			Non-Discou	nted Spend (US\$ BNs	5)	
Rank	Corporation	MAT DEC 2022	Market Share	Generic Market Share	ABS Growth	Growth
1	TEVA PHARM USA	\$4.0	0.6%	7.5%		
2	VIATRIS INC.	\$3.8	0.6%	7.1%		
3	PRASCO LABS	\$2.1	0.3%	4.0%		
4	AMNEAL INC	\$2.1	0.3%	3.9%		
5	NOVARTIS	\$1.9	0.3%	3.6%		
6	HIKMA PHARM	\$1.7	0.3%	3.3%		
7	ENDO PHARM INC.	\$1.7	0.3%	3.1%		
8	APOTEX CORP	\$1.6	0.3%	3.1%		
9	SUN PHARMA	\$1.6	0.3%	3.0%		
10	ZYDUS PHARM	\$1.4	0.2%	2.6%		
TOP 10)	\$22.0	3.5%	41.0%	-\$1.0	-4.5%



The top 20 generic corporations* are declining at 5.9% and account for 61.1% generic market share

			Non-Discou	nted Spend (US\$ BN:	s)	
Rank	Corporation	MAT DEC 2022	Market Share	Generic Market Share	ABS Growth	Growth
11	DR REDDY INC	\$1.4	0.2%	2.6%		
12	AUROBINDO PHARM	\$1.3	0.2%	2.5%		
13	LUPIN	\$1.3	0.2%	2.4%		
14	FRESENIUS KABI	\$1.2	0.2%	2.2%		
15	GRIFOLS	\$1.1	0.2%	2.0%		
16	PFIZER	\$1.1	0.2%	2.0%		
17	PADAGIS LLC	\$0.9	0.1%	1.7%		
18	NORTHSTAR RX	\$0.9	0.1%	1.6%		
19	GILEAD SCIENCES,IN	\$0.9	0.1%	1.6%		
20	GLENMARK PHARMA	\$0.8	0.1%	1.6%		
TOP 20)	\$32.9	5.2%	61.1%	-\$2.1	-5.9%



Aurobindo shows highest absolute growth in total market unbranded generic corporation sales on non discount spend

Top 10 Generic Corporations by Absolute Growth - MAT November 2022 (Sales \$ in Millions)

	Ubranded Generic Corporations								
Rank	Corporation	MAT Nov 2022 \$	Absolute Growth \$						
1	AUROBINDO PHARM	76.2	26.4						
2	BRAINTREE LABS INC	34.2	21.4						
3	CAMBER	49.4	19.3						
4	ALVOGEN	24.6	18.9						
5	ZYDUS PHARM	18.8	8.7						
6	ASCEND LABS	63.6	6.7						
7	AJANTA PHARMA USA	26.8	6.6						
8	GRANULES PHARMA	6.5	6.4						
9	AKORN CORP	44.3	6.2						
10	CHARTWELL	5.5	5.2						

Source: IQVIA, National Sales Perspectives, 2022

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The impact of exclusivity losses will drop to \$56Bn over five years including significant biosimilars impact through the period

U.S. impact of brand losses of exclusivity 2017–2026, US\$Bn



Source: IQVIA Market Prognosis, Sep 2021; IQVIA Institute, Mar 2022.

The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2026. Report by the IQVIA Institute for Human Data Science.

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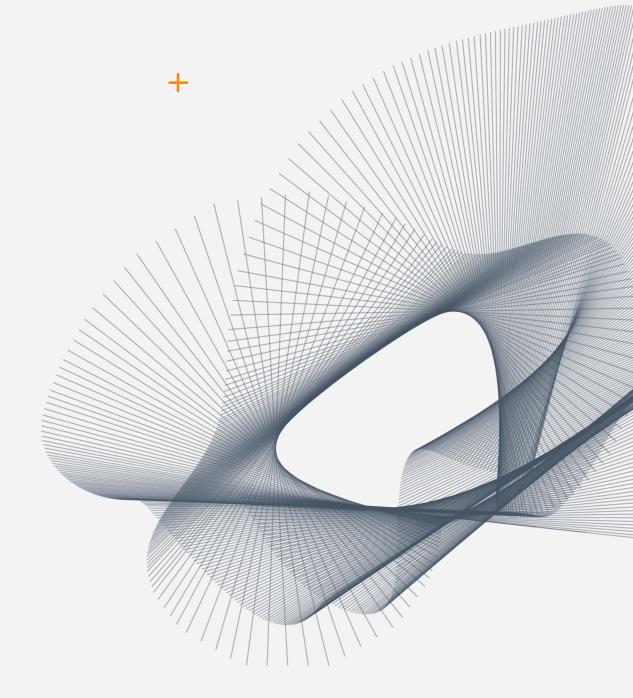




Biosimilars in the United States 2023-2027

COMPETITION, SAVINGS, AND SUITABILITY

JANUARY 2023

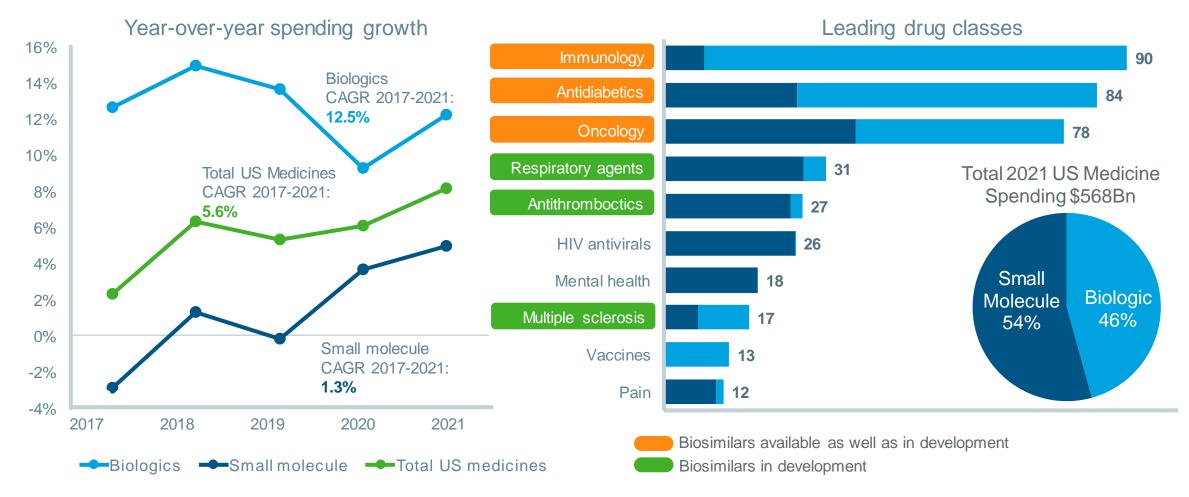




Market dynamics and biosimilar development

The U.S. biologics market continues to grow faster than nonbiologics on an invoice-basis, and now comprises 46% of spending

Total U.S. invoice spending growth by type and leading therapy areas by 2021 spending, US\$Bn

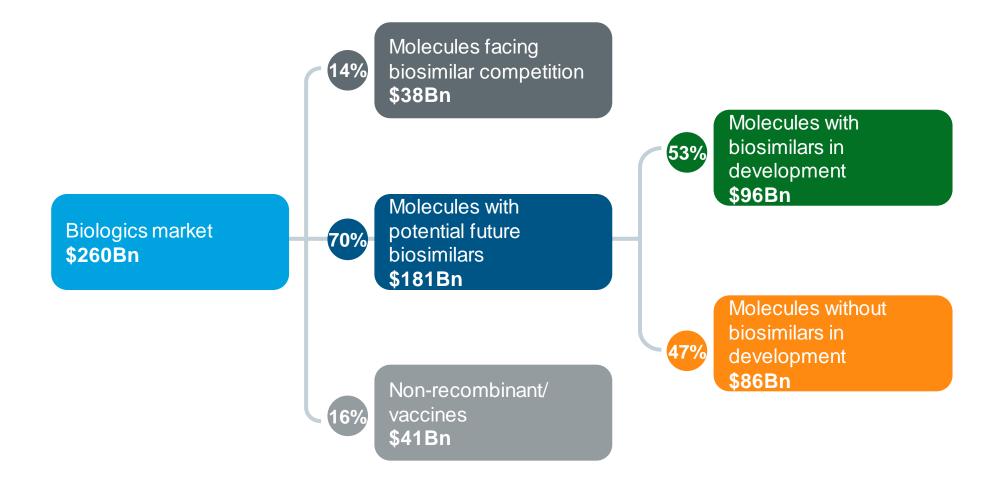


Source: IQVIA MIDAS, Dec 2021; IQVIA Institute, Nov 2022. Biosimilars in the United States 2023-2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.



Molecules with biosimilars total \$38 billion of invoice spending, while biosimilar development is targeting a further \$96 billion

2021 biologics market segmented by status of biosimilar competition and biosimilar development

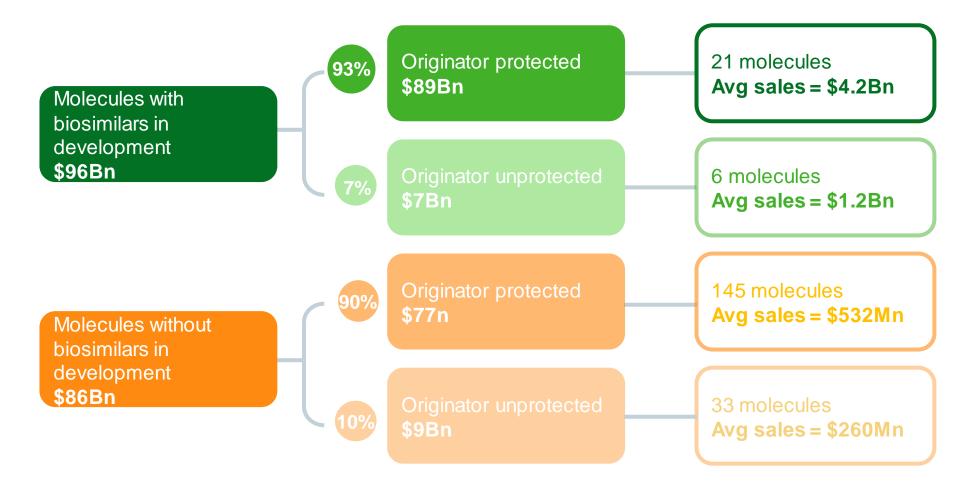


Source: IQVIA MIDAS, Dec 2021; IQVIA Pipeline Intelligence, IQVIA Institute, Nov 2022. Biosimilars in the United States 2023-2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.



Most of the molecules with biosimilars in development continue to be protected, with only 7% unprotected

2021 biologics market segmented by status of biosimilar development and market exclusivity

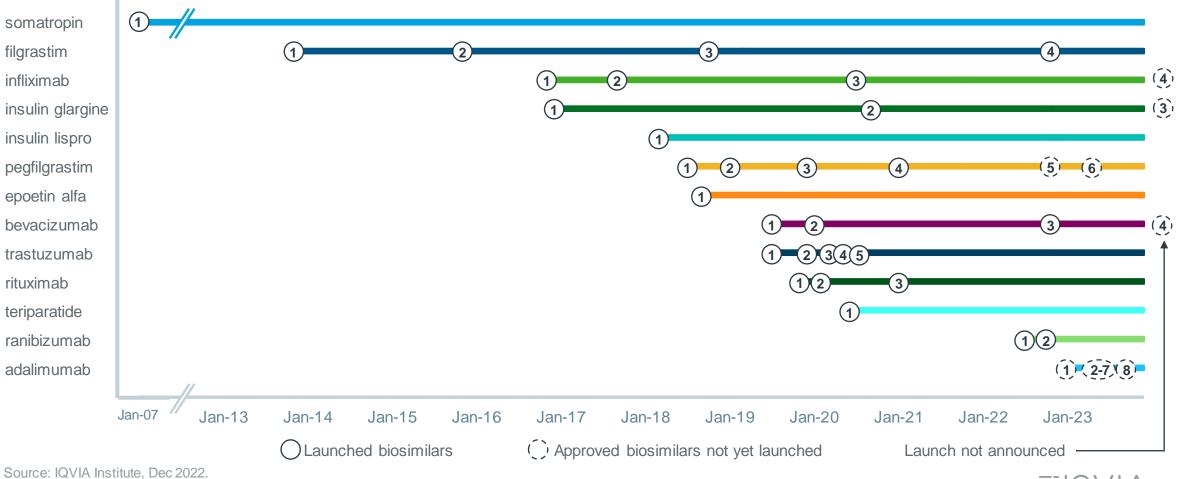


Source: IQVIA MIDAS, Dec 2021; IQVIA Pipeline Intelligence, IQVIA Institute, Nov 2022. Biosimilars in the United States 2023-2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.



Since 2007, 30 biosimilars have launched in the U.S. with 10 more approved and set to launch by the end of 2023

Biosimilars approved and launched in the U.S.

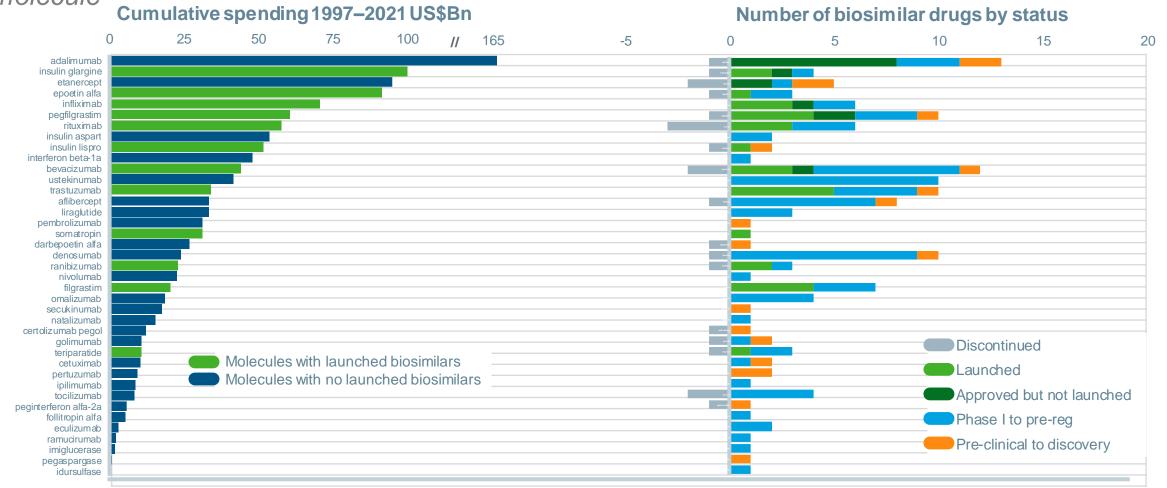


Biosimilars in the United States 2023-2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.



There are biosimilars approved or in clinical development in the U.S. for 20 additional molecules

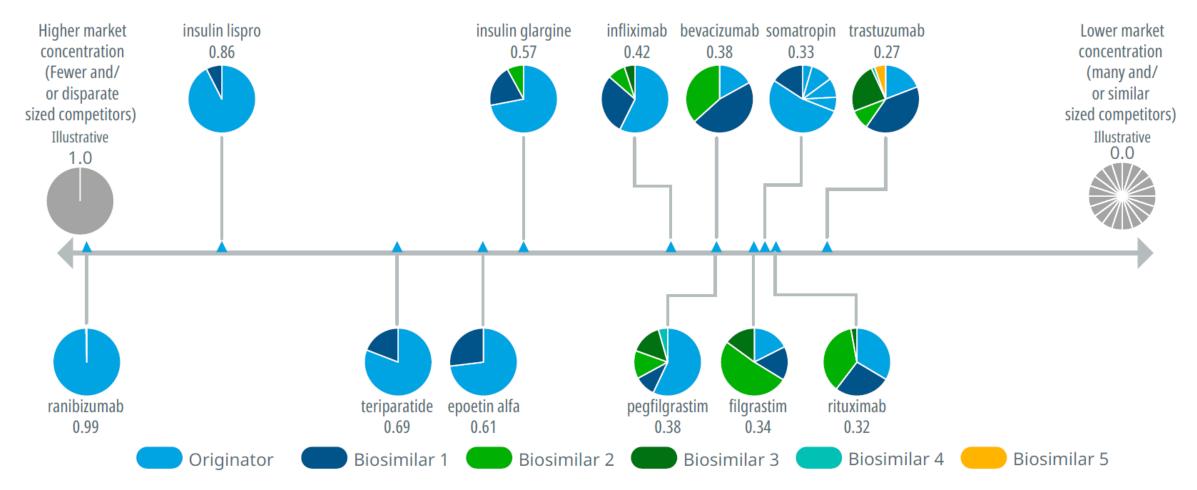
Cumulative molecule spending and approved, launched and pipeline biosimilar products for the molecule



Source: IQVIA MIDAS, Dec 2021; IQVIA Pipeline Intelligence, IQVIA Institute, Dec 2022. Biosimilars in the United States 2023-2027 – Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.

For molecules facing biosimilars, competitiveness is highly varied but large share for later competitors is rare

Market concentration Herfindahl-Hirschman Index and shares by competitor Q3 2022



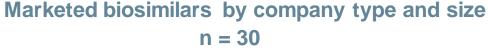
Biosimilars in the United States 2023-2027 - Competition, Savings and Sustainability. Report by the IQVIA Institute for Human Data Science.

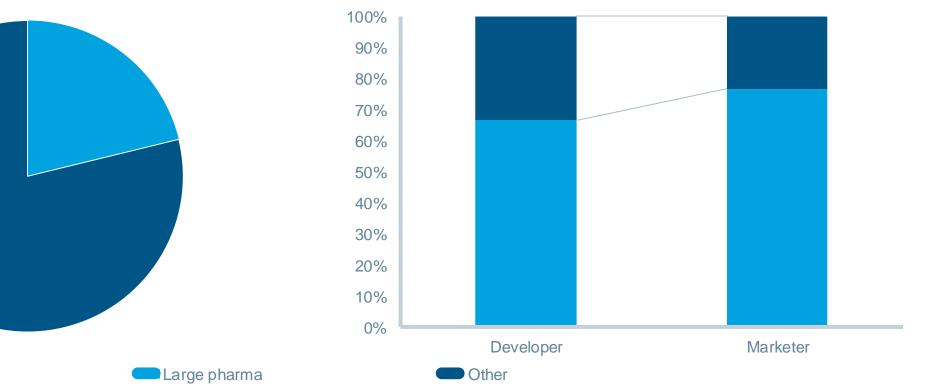


Development of biosimilars is being driven by smaller companies, while marketing is done mostly by large companies

Biosimilars in development and marketed in the U.S. by company type and size

Biosimilars in development n = 118

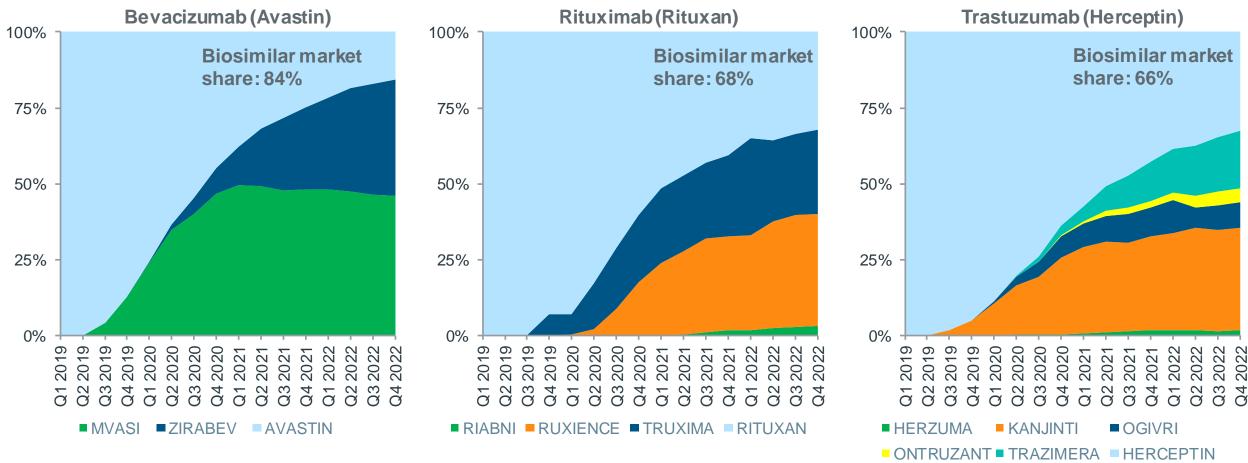






In Oncology biosimilars market share ranges from 66% - 84%

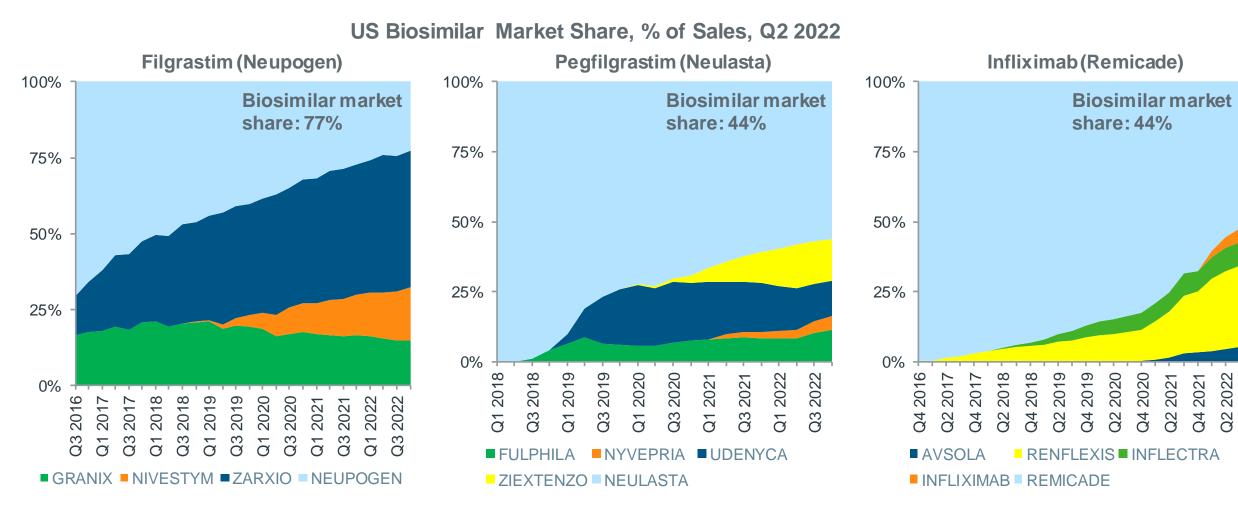




Originator

≣IQVIA

Filgrastim's biosimilar has 77% market share



Originator

2022

Biosimilars will continue to impact all aspects of the healthcare system, with significant implications from upcoming events

Key biosimilar implications for stakeholders across the healthcare system

Patients

Insurance coverage and out-of-pocket costs

Treatment experience with existing therapies

Recommendations from provider



Reimbursement decisions and formulary placement of biosimilars will impact uptake

Interchangeability a relatively new aspect



Providers

Patient stability and compliance with current therapy Likelihood of payer coverage for patient population

Incentives for biosimilar prescribing

Biosimilar companies

Assessing viable opportunities for biosimilar development (i.e., ROI) Cost vs. benefit of interchangeability





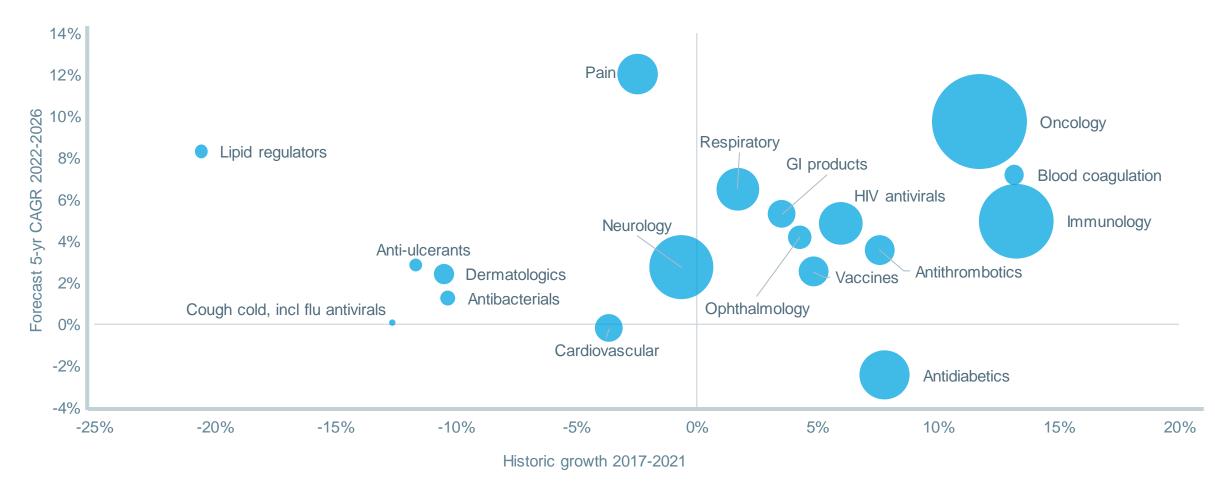
Outlook





Immunology, oncology, neurology drive growth through 2026 along with COVID-19 vaccines

Historic and forecast net spending growth for leading therapy areas



Source: IQVIA Institute, Mar 2022.

The Use of Medicines in the U.S.: Usage and Spending Trends and Outlook to 2026. Report by the IQVIA Institute for Human Data Science.

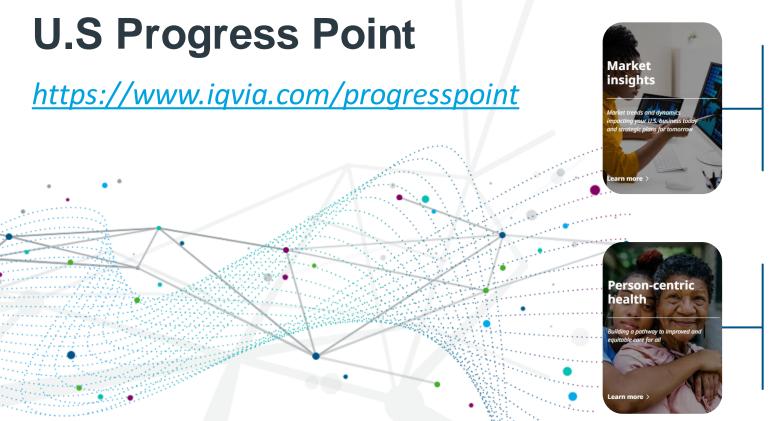
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A quick recap

- COVID deaths and RSV, Cough, Cold Flu are on the decline
- Institutional claims are weak as are elective procedures
- Non retail and particularly hospitals and LTC bore the brunt of COVID
- Telehealth is about 7% of the claims
- Specialty is now 51% of the total market sales
- Unbranded generics are growing on prescriptions but continue to fall on Dollars
- Unbranded generic injectables have grown nicely until recently
- The Biosimilar wave is upon us with Humira now facing one competitor now with many more to come
- Most of the LOE opportunities will be in Biosimilars





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

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



Engagement innovation

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



Thank you

Disclaimer:

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Doug Long is Vice President of Industry Relations at IQVIA (formerly QuintilesIMS), the world's largest pharmaceutical information company. IQVIA offers services to the pharmaceutical industry in over 100 countries around the globe. Doug has been with IQVIA since 1989.

His fundamental task is to help secure data for all existing and new databases supported by IQVIA, manage supplier, manufacturer & association relationships, and develop information for data partners. As direct consequence of his involvement in these areas, Doug has considerable experience with, and a unique perspective on, the changing U.S. and global healthcare marketplace and pharmaceutical distribution.

Doug is a frequent industry speaker and the recipient of many awards from trade groups. Before joining IQVIA Doug held positions at Nielsen Market Research for 16 years in various sales and marketing capacities. A native of Illinois, Doug received a BA from DePauw University and holds an MBA in management from Fairleigh Dickinson University.

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APPENDIX

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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



Generally injectable and/or not self-administered



Unique distribution



Requires extensive or in-depth monitoring/patient counseling



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



Requires reimbursement assistance

