US Pharmaceutical Trends, Issues and Outlook for NACDS

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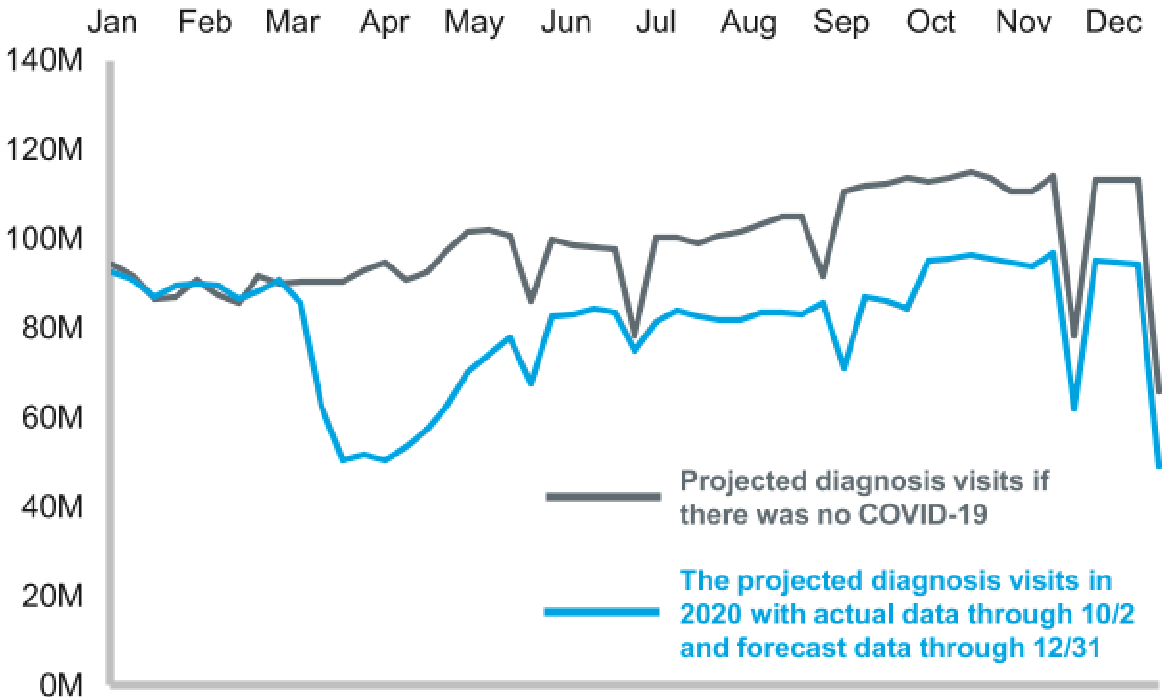
Evaluating the Impact

Medical claims/activity

2020 in Review: COVID-19 Diagnosis Visit[1] Gap Model

Actual Data Week Ending October 2, 2020



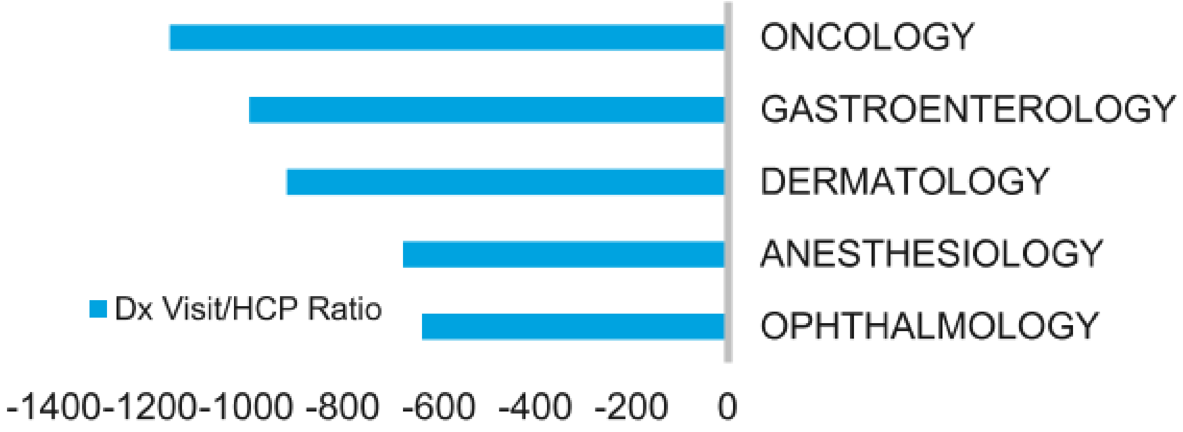
Total Gap of Diagnosis Visits in 2020 (Unique patient-provider diagnosis events) **-920M**

% of Total Diagnosis Visits in 2020 **-21.4%**

What is the "diagnosis visit gap"?

Difference between diagnosis visits[1] expected during a hypothetical non-COVID scenario and the number of diagnosis visits we actually see

Top 5 Specialties by Dx Visits Gap/HCP

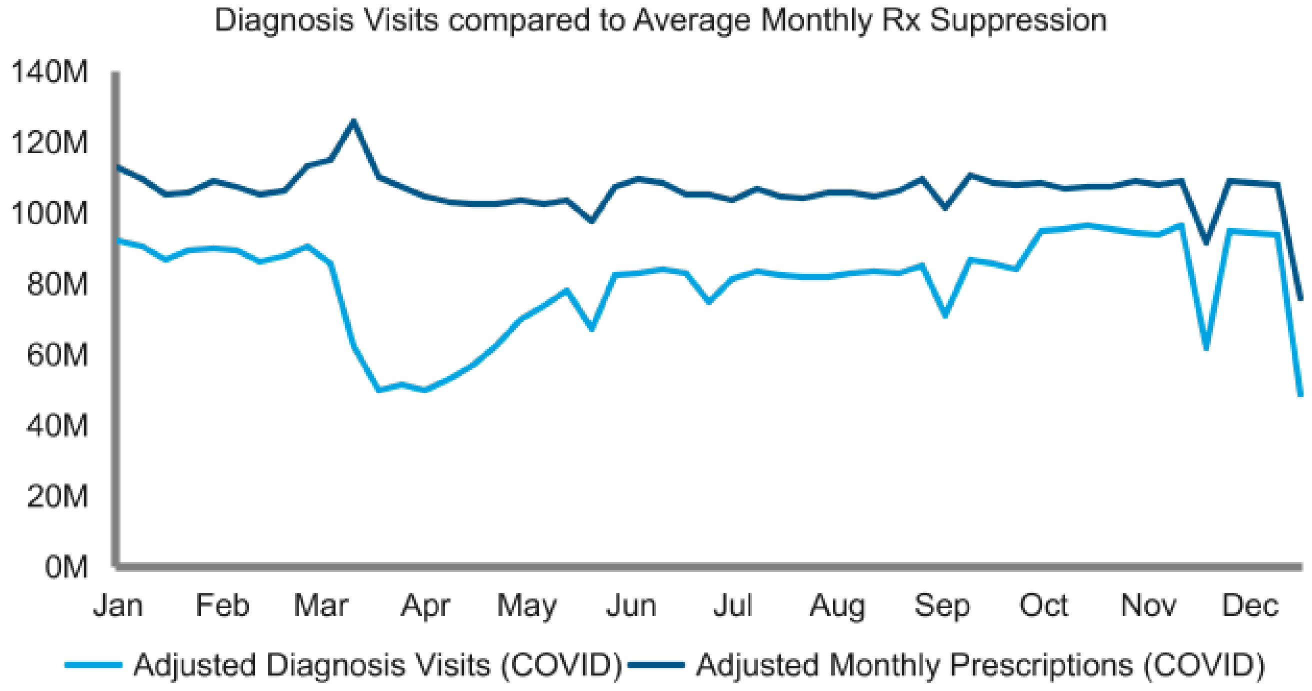


COVID-19 Diagnosis Visit Backlog - w/e Oct 2, 2020; Source: IQVIA: Medical Claims Data Analysis, 2020, IQVIA Analysis

[1]A diagnosis visit is for one single diagnosis per patient, per HCP; a patient can have more than one diagnosis visit assigned to them, with either more than one diagnosis per doctor or more than one doctor per diagnosis

A decline in diagnosis visits impacts on prescription utilization, quantified as "Rx suppression"

There was a clear relationship between Dx and Rx in 2020



Preview

Prescription Suppression Model for 2021

Overview:
A projection of the gap between average monthly prescriptions filled in a non-COVID scenario and those expected to be filled in 2021, based on a variety of triggers and assumptions.

- Which specialties are experiencing the largest suppression of filled RXs as the pandemic continues?
- Do regional changes affect the amount of suppressed Rxs?
- What triggers improve or worsen the suppression of filled monthly prescriptions across America as the pandemic evolves

Source: IQVIA Longitudinal RX and Medical Claims Data analysis, 2020; actual through 11/27/20

Targeted oncology usage in the U.S. is 4% below expected levels through early October likely the effect of missed diagnoses

Orals and subcutaneous forms less impacted than IV forms

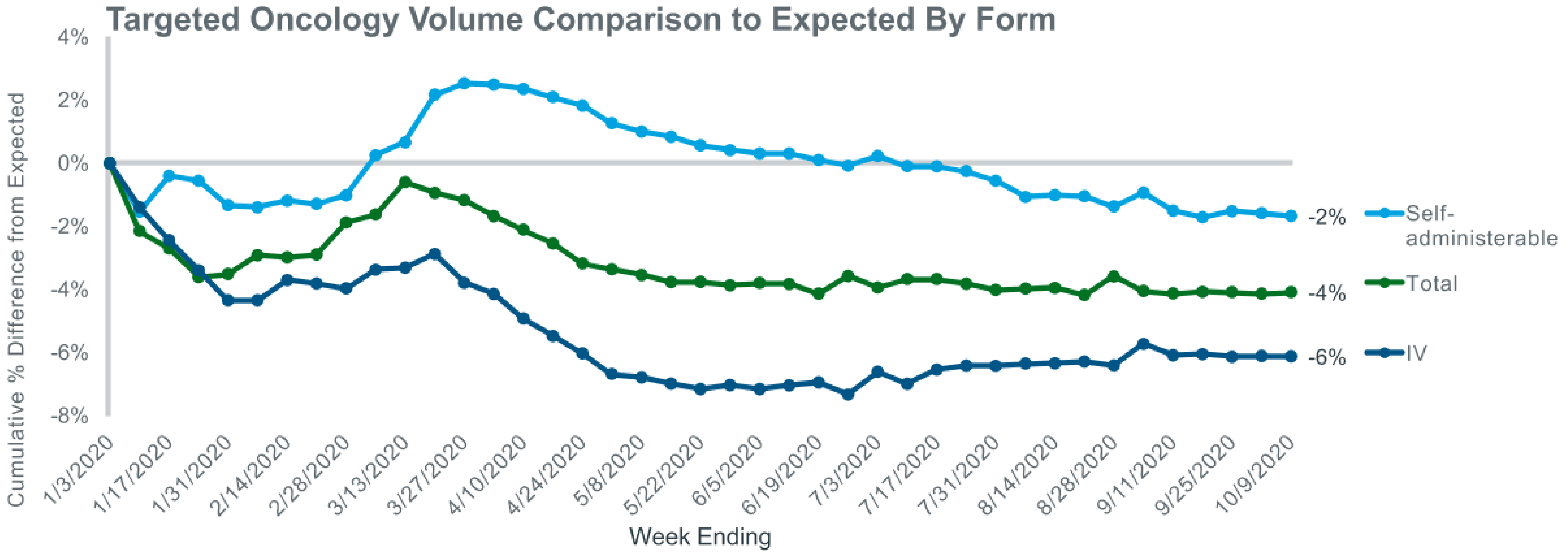
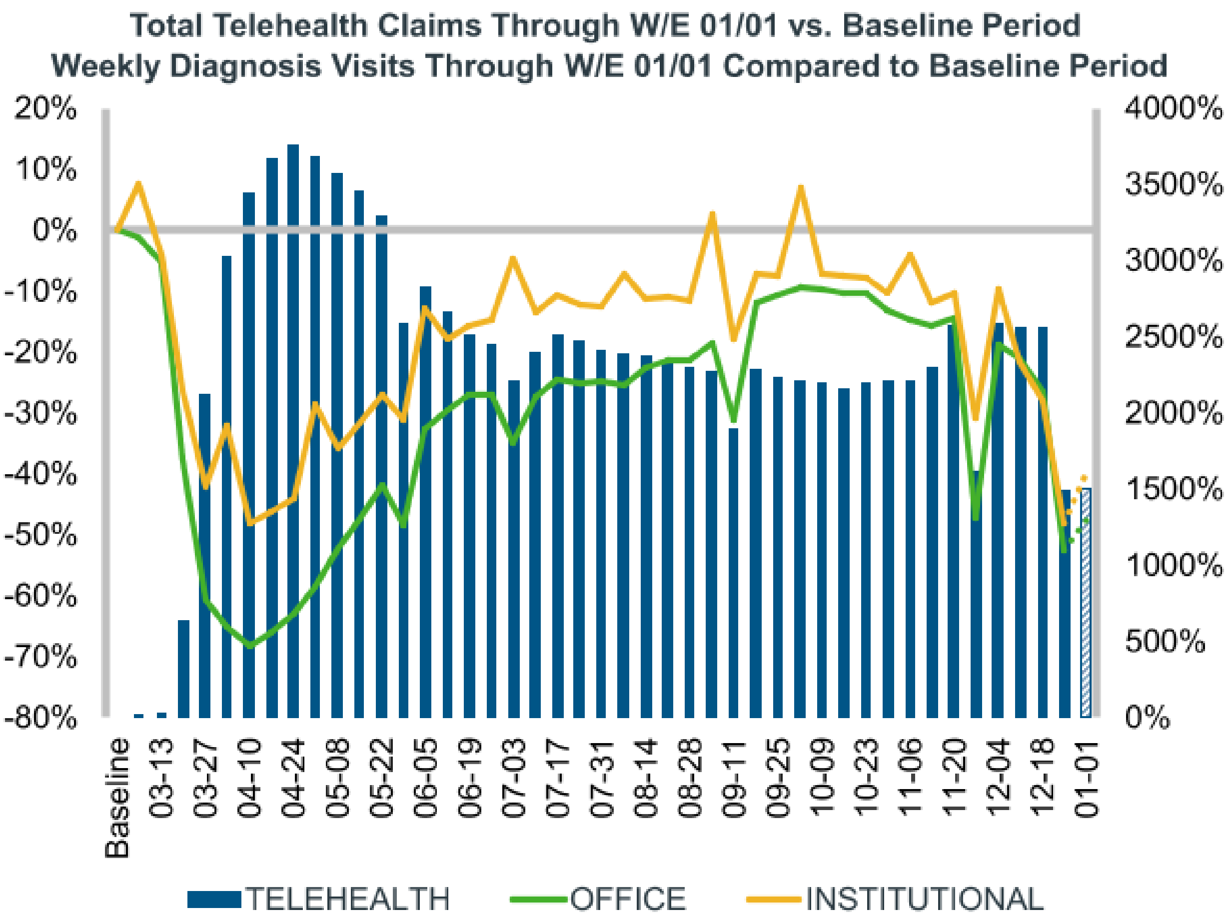
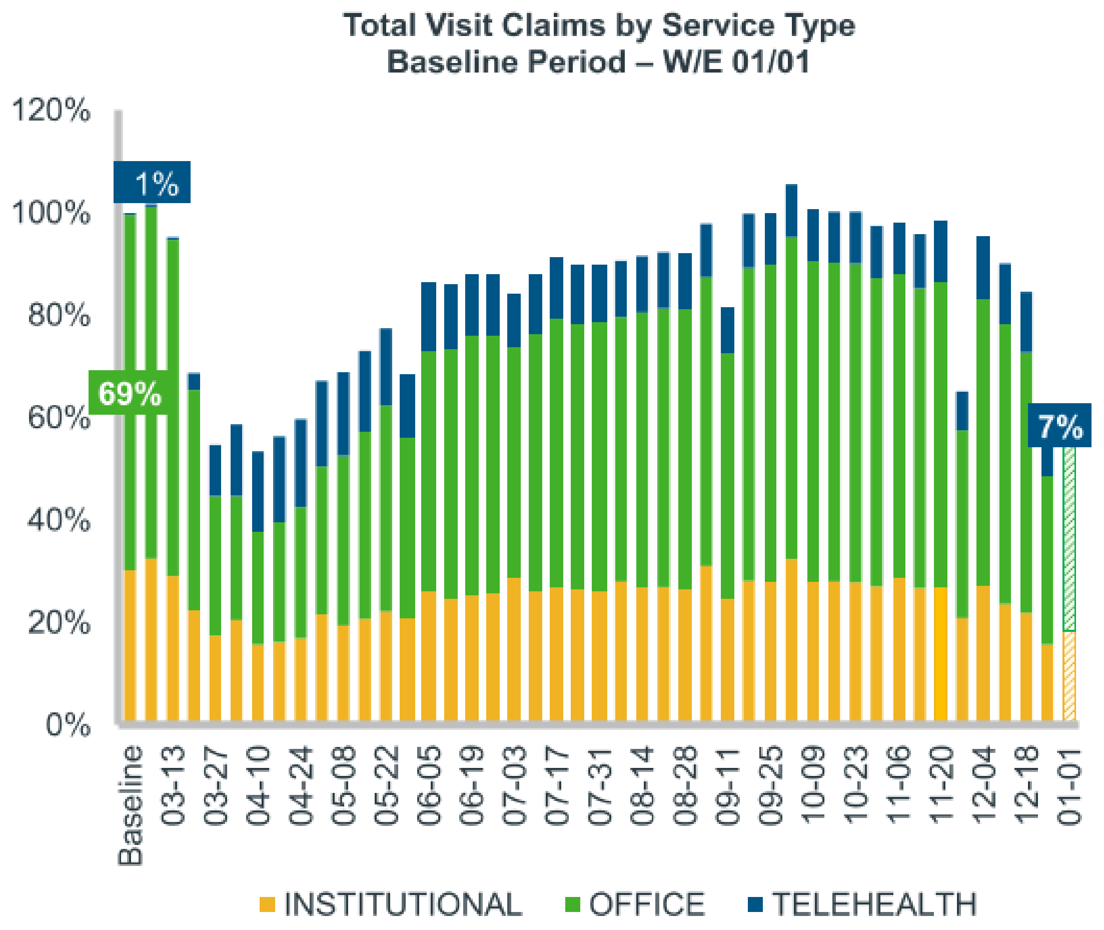


Chart notes: Expected volumes based on week-to-week growth rates in 2019 applied to volume in week ending Jan 3 2020. Self-administerable includes oral and subcutaneous forms and does not distinguish based on provider actual actions. It is known that some subcutaneous and oral forms are administered by providers in actual practice.
Source: IQVIA National Sales Weekly, 10/9/2020

IQVIA INSTITUTE

Weekly Medical Claims: Office, Institutional, Telehealth vs. Baseline

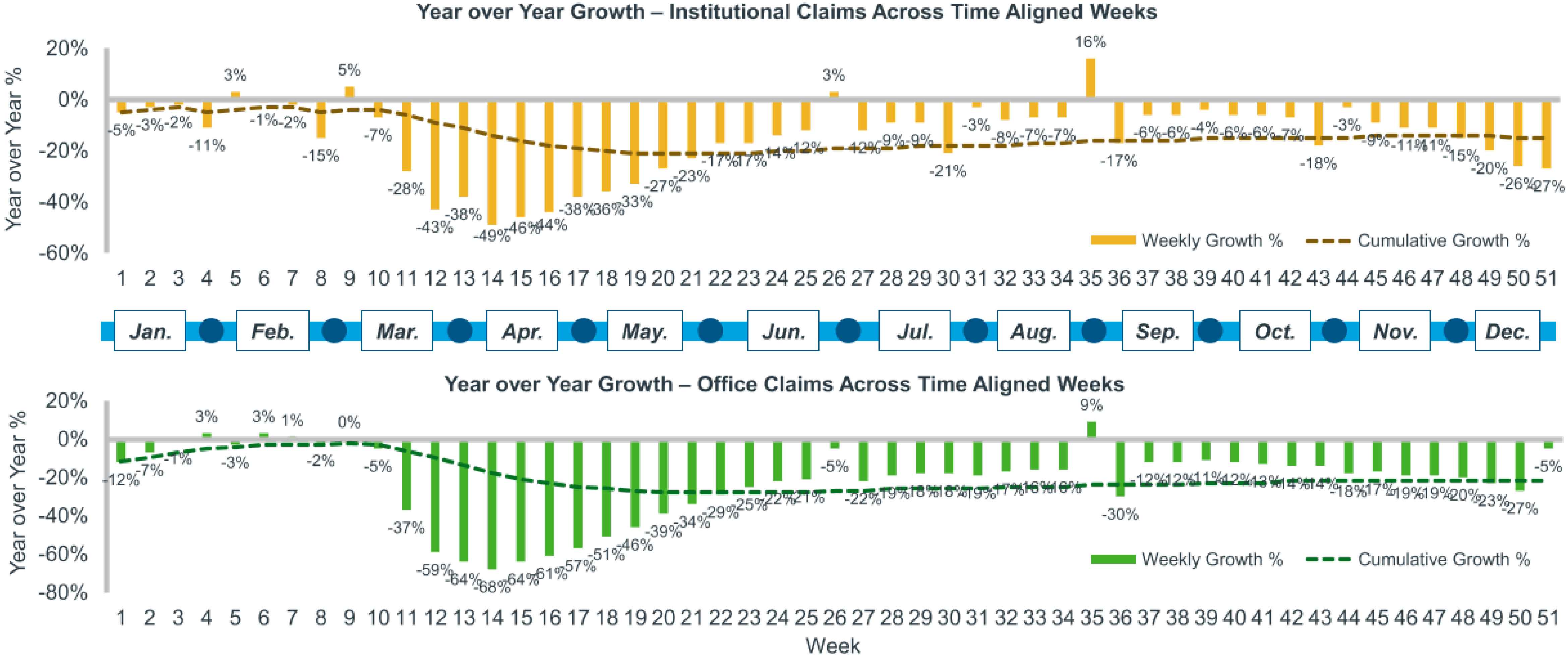




Data for latest week date controlled against prior periods; estimates have been applied to reflect anticipated late-adjudicated claims based on historical rates

Source: IQVIA: Medical Claims Data Analysis, 2020; Baseline = Average of claims for period W/E 1/10/2020-2/28/2020,
Estimated amounts for latest weeks applied based on likely claims still to be received due to data latency or claim processing delays; See Appendix for further details

Institutional & Office Medical Claims: Weekly and Cumulative YoY Growth



Data for latest week date controlled against prior periods; estimates have been applied to reflect anticipated late-adjudicated claims based on historical rates

Source: IQVIA: Medical Claims Data Analysis, 2020; Week 1 2019 = W/E 1/11/2019; Week 1 2020 = W/E 1/10/2020, Week 51 2019 = W/E 12/27/2019; Week 51 2020 = W/E 12/25/2020
Estimated amounts for latest weeks applied based on likely claims still to be received due to data latency or claim processing delays; See Appendix for further details

NBRx Productivity: Face to Face vs. Telehealth Activities by Specialties

NBRx Per Patient Visit

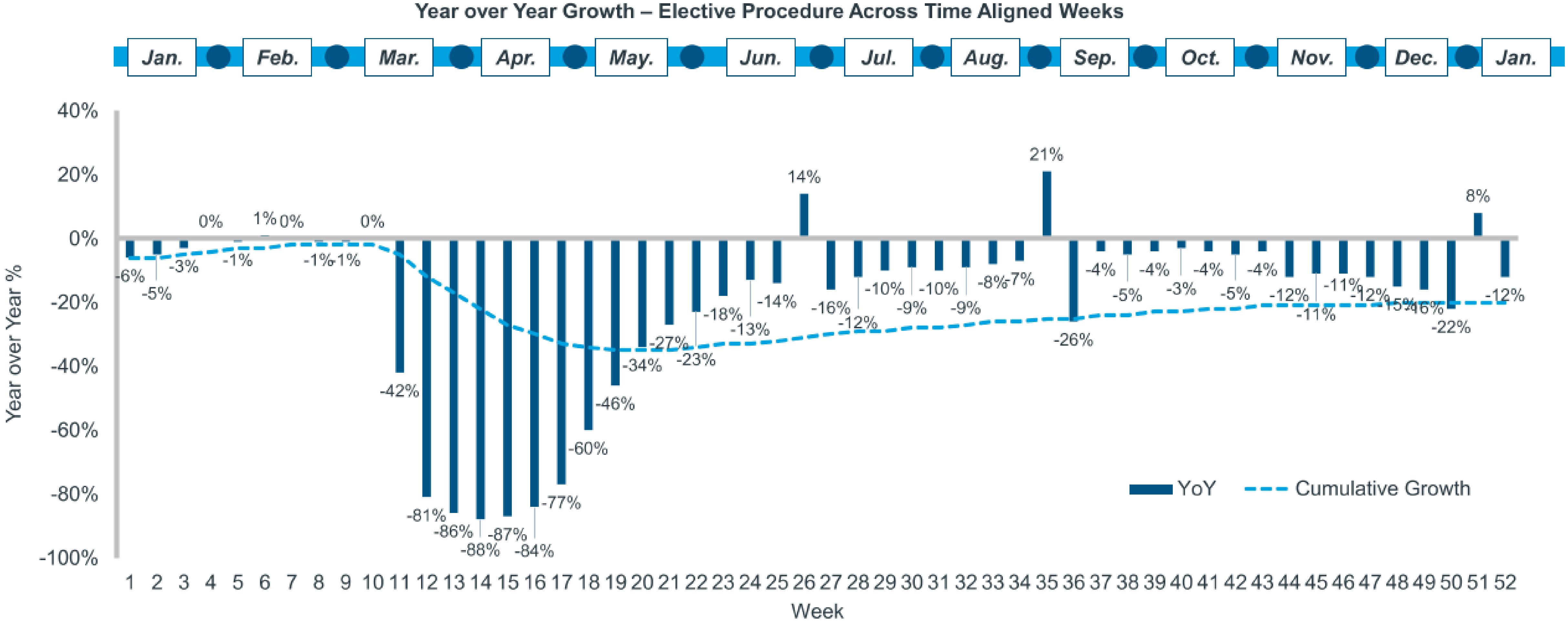
Specialty	4 W/E 12/27/19 Office	4 W/E 12/25/20 Office	4 W/E 12/25/20 Telehealth	Difference (%) Office v. TM
Allergists	0.97	0.97	0.79	-19%
Dermatologists	1.15	1.15	0.90	-22%
PCP	1.01	1.01	0.78	-23%
Pulmonologists	0.92	0.92	0.66	-27%
Gastroenterologists	1.03	1.03	0.71	-31%
Rheumatologists	0.50	0.51	0.35	-31%
Ob/Gyn	1.13	1.13	0.77	-31%
Cardiologists	0.64	0.64	0.42	-34%
Pediatrics	1.20	1.19	0.78	-35%
Ophthalmologists	1.26	1.26	0.82	-35%
Neurologists	0.55	0.55	0.35	-36%
Psychiatry	0.42	0.42	0.25	-40%
Endocrinologists	0.58	0.58	0.34	-42%
Urology	1.13	1.13	0.64	-44%

Source: NPA New To Brand (NPA NTB); Medical Claims analysis; 2020; Custom analysis
Evaluation of medical claims visit with same patient/prescriber combination occurring as NBRx within 2 weeks of medical claim service date

Potential Drivers of Difference

- Patient mix skews towards existing patients replacing office visits with telehealth
- Willingness to initiate new therapy remotely
- Lack of diagnostics such as vitals and labs are impeding diagnosis of new conditions
- Prescribers are reporting spending less time on a telehealth call with patients which may reduce NBRx opportunity
- Many offices have now adapted protocols to safely see patients enabling the preference to NBRx office prescribing

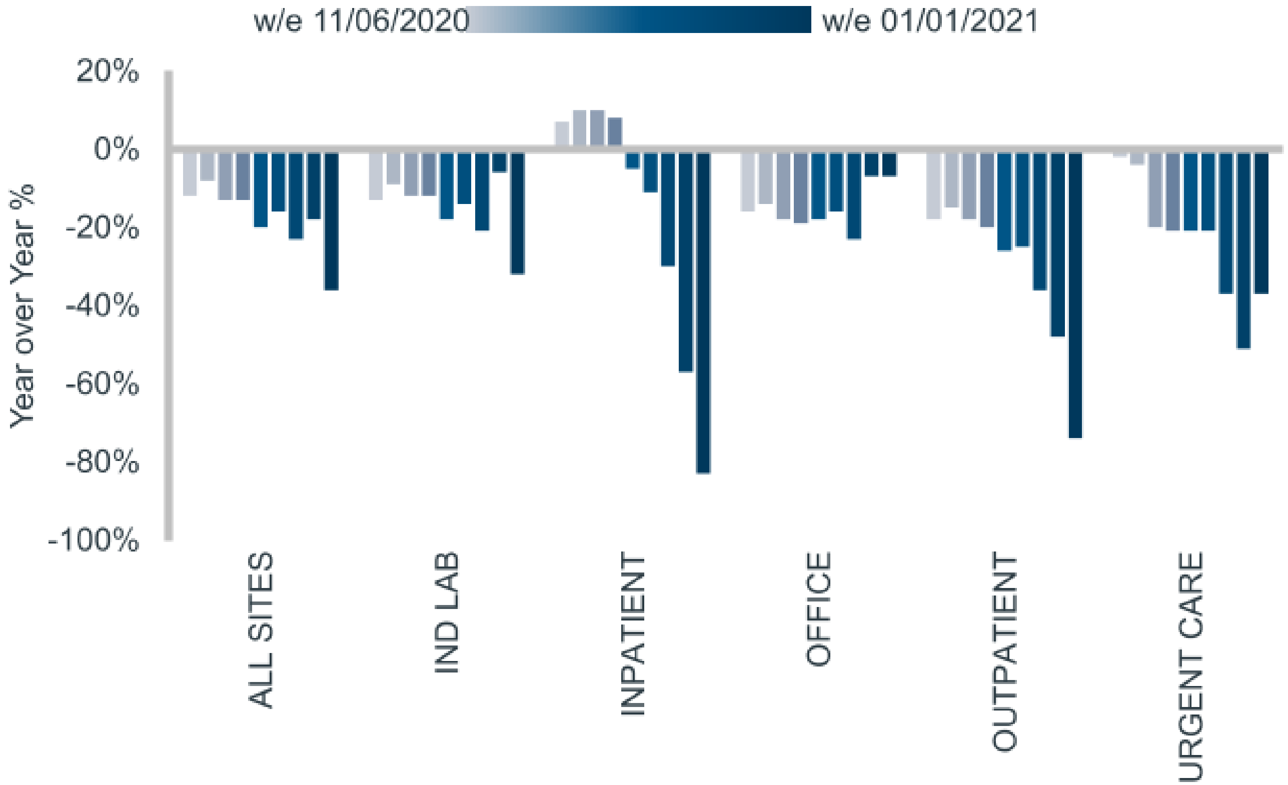
Elective Procedures: Weekly YoY and Cumulative Growth



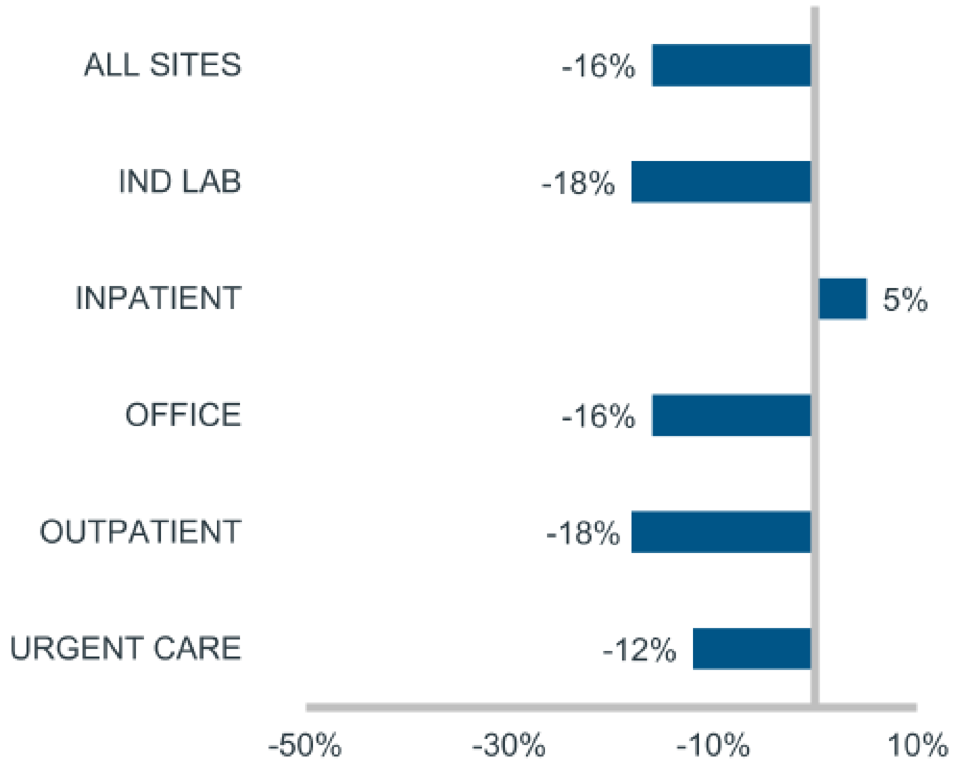
Source: IQVIA: Medical Claims Data Analysis, 2020; Week 1 2019 = W/E 1/11/2019; Week 1 2020 = W/E 1/10/2020, Week 52 2019 = W/E 01/03/2020; Week 52 2020 = W/E 01/01/2021
Elective procedures based on IQVIA custom analysis; Data includes claims from inpatient and outpatient sites of care
Latest two weeks are estimates using a recency data factor that is adjusted out as all claims are received; See Appendix for further details

Lab Test Orders: Weekly YoY and Cumulative Growth

Lab Tests YoY Weekly Growth by Order Site
National Weekly Growth = -2.4%



Lab Test YTD Growth vs. Prior Year
by Place of Service (01/01/21 vs. 01/03/20)

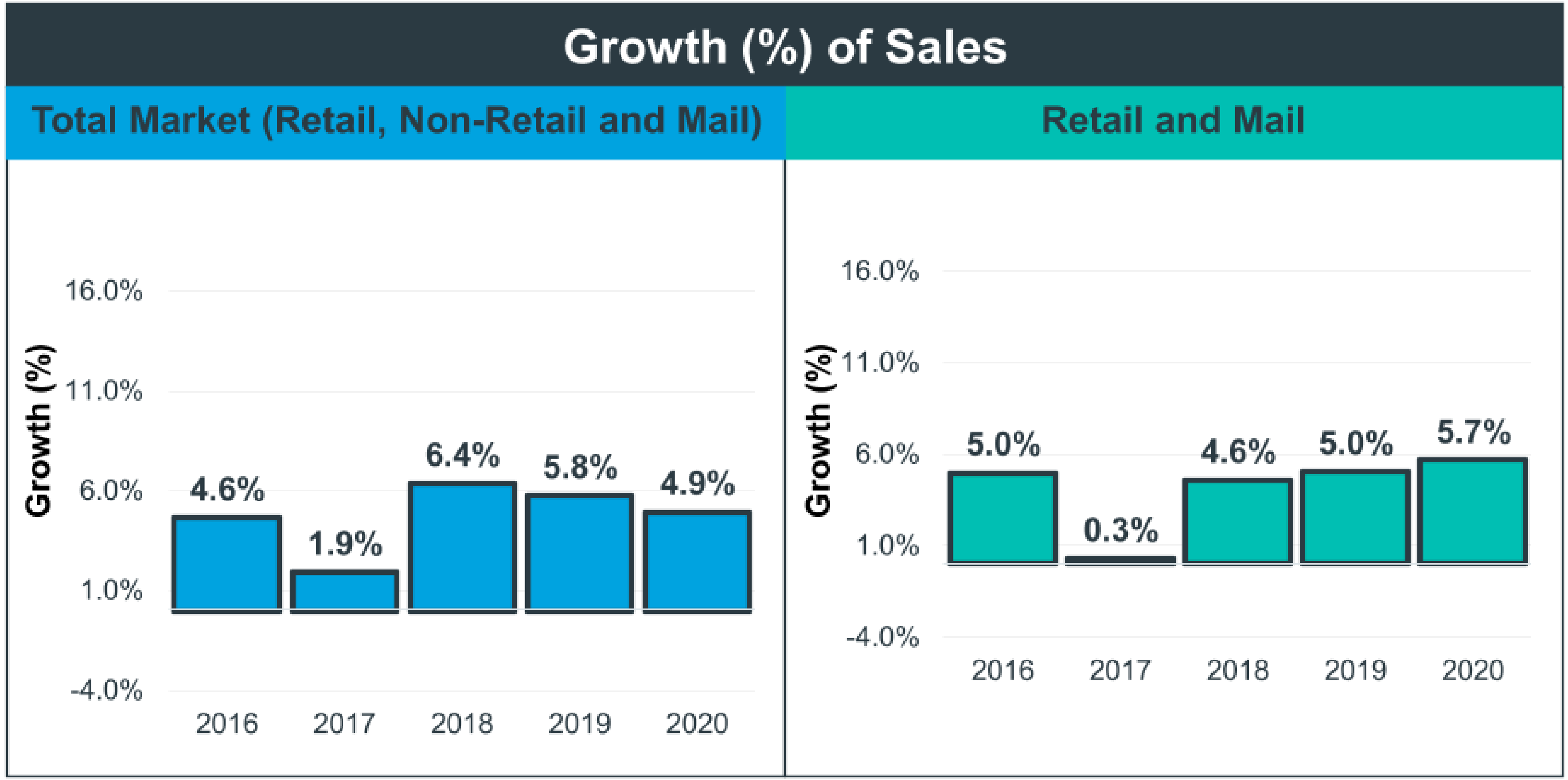


Data for latest week date controlled against prior periods; estimates have been applied to reflect anticipated late-adjudicated claims based on historical rates

Source: IQVIA: Medical Claims Data Analysis, 2020; Latest Week: W/E 01/01/21 vs. 01/03/20
Latest two weeks are estimates using a recency data factor that is adjusted out as all claims are received; See Appendix for further details

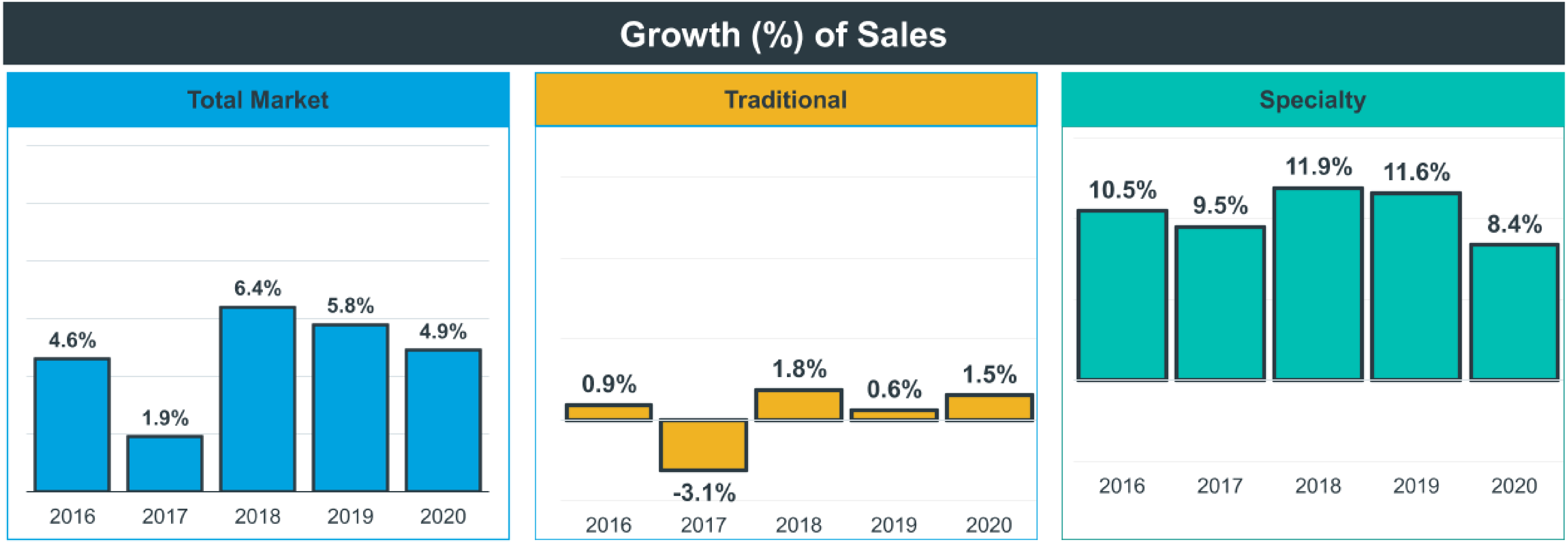
Where are we now?

Total US market dollar sales are growing at a slower rate than retail & mail (combined)



Source: IQVIA, National Sales Perspectives, December 2020
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

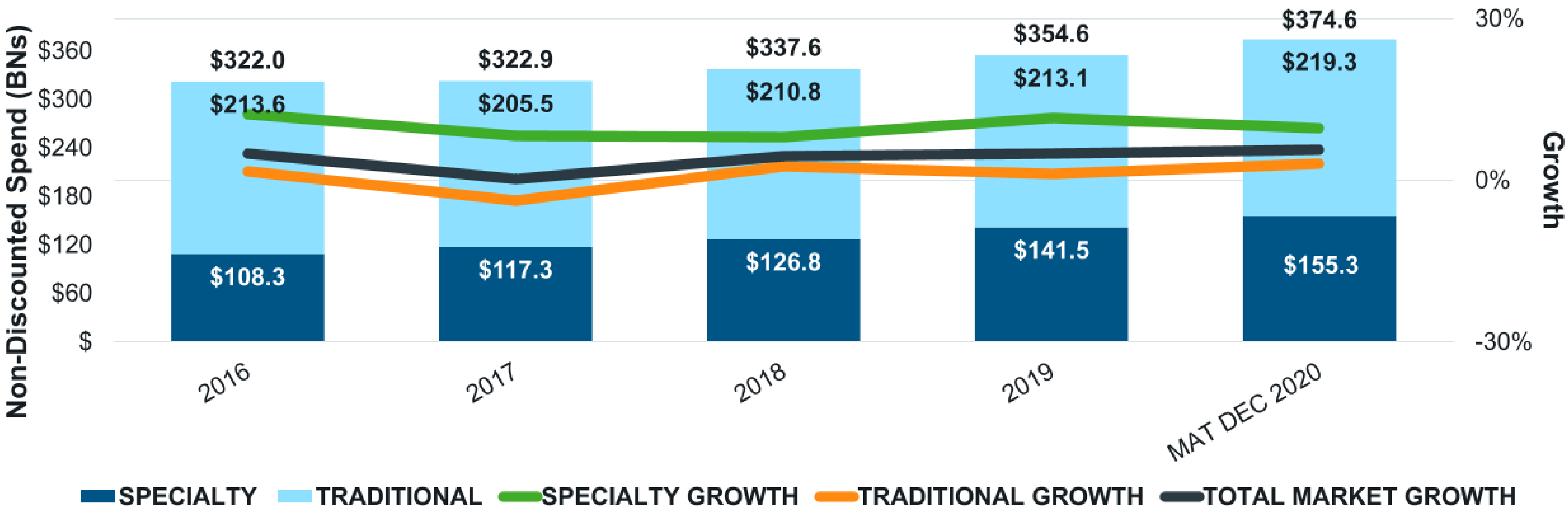
Specialty dollar growth has been very strong and stumbled slightly in 2020 after topping 10% in the prior 2 years



Source: IQVIA, National Sales Perspectives, November 2020
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

For retail and mail channels (combined), specialty growth is outpacing traditional growth and now has ~42% share of total non-discounted spend

In MAT December 2020, specialty spend increased 9.8% while traditional products grew 2.9%

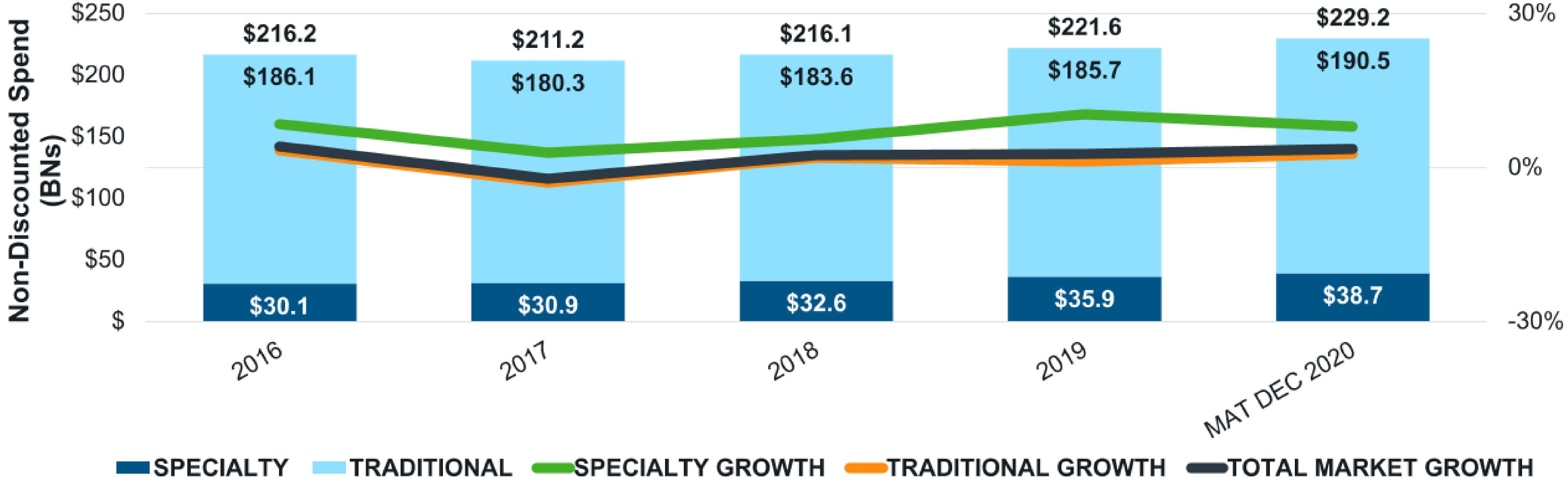


Share of Sales	2015	2016	2017	2018	2019	MAT DECEMBER 2020
SPECIALTY	31.5%	33.7%	36.3%	37.6%	39.9%	41.5%
TRADITIONAL	68.5%	66.3%	63.7%	62.4%	60.1%	58.5%

Source: IQVIA, National Sales Perspectives Restricted to Retail and Mail Channels, December 2020

For the retail channel, specialty growth is outpacing traditional growth and now has ~17% share of total non-discounted spend

In MAT December 2020, specialty spend increased 7.8% while traditional grew 2.6%

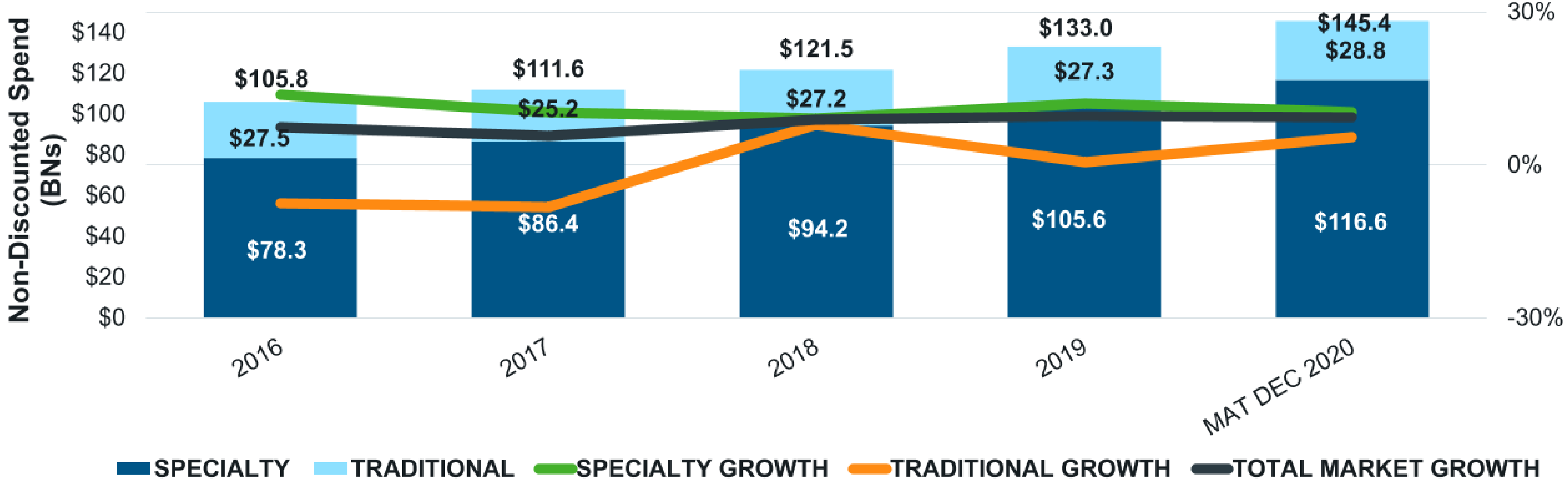


Share of Sales	2015	2016	2017	2018	2019	MAT DECEMBER 2020
SPECIALTY	13.3%	13.9%	14.6%	15.1%	16.2%	16.9%
TRADITIONAL	86.7%	86.1%	85.4%	84.9%	83.8%	83.1%

Source: IQVIA, National Sales Perspectives Restricted to Retail Only, December 2020

For mail, specialty growth is outpacing traditional growth and now has ~80% share of total non-discounted spend

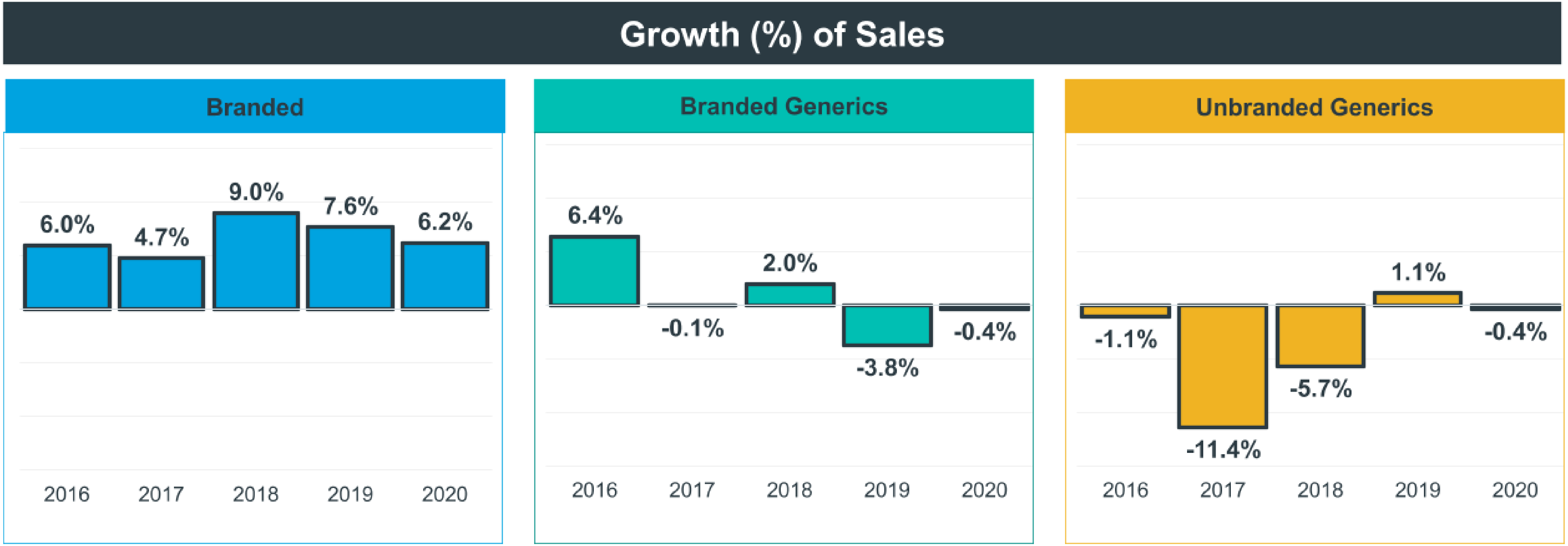
In MAT December 2020, specialty spend grew 10.4% while traditional products grew 5.3%



Share of Sales	2015	2016	2017	2018	2019	MAT DECEMBER 2020
SPECIALTY	69.8%	74.0%	77.4%	77.6%	79.4%	80.2%
TRADITIONAL	30.2%	26.0%	22.6%	22.4%	20.6%	19.8%

Source: IQVIA, National Sales Perspectives Restricted to Mail Only, December 2020

Branded growth has weakened but still growing while Generics were negative in 2020

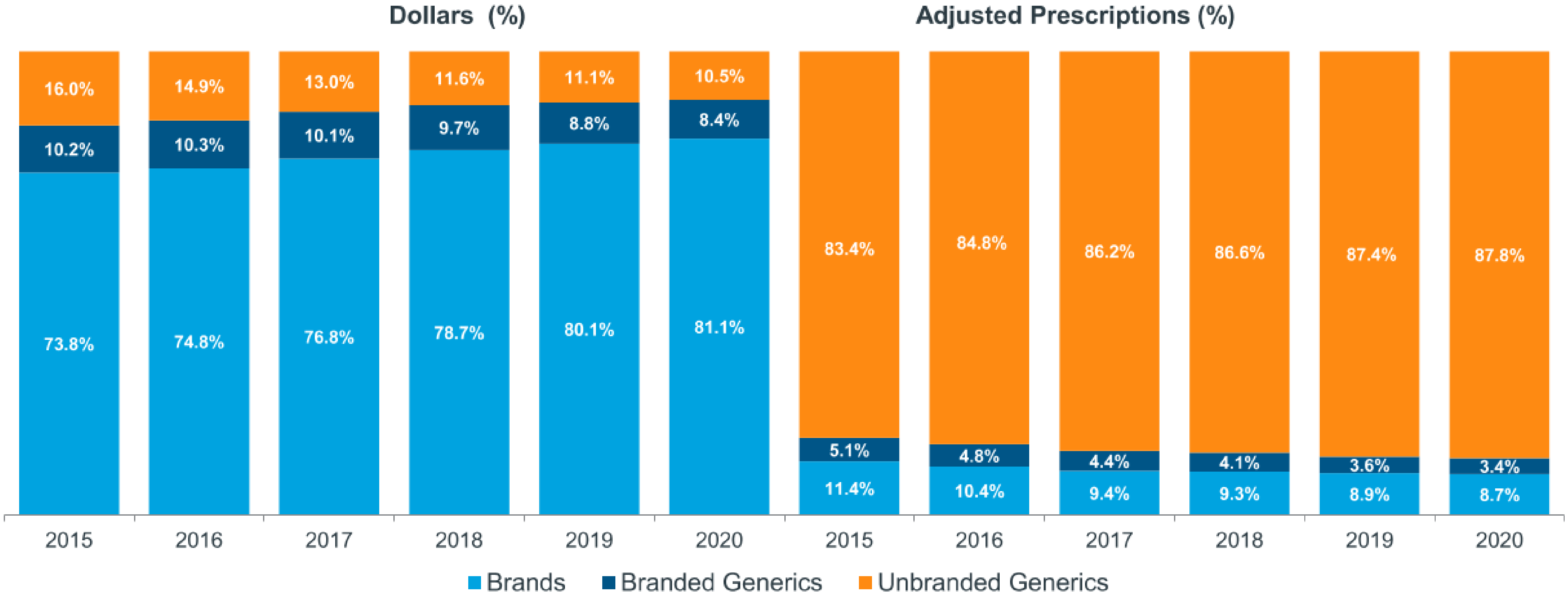


Source: IQVIA, National Sales Perspectives, November 2020
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

IQVIA

87.8% of prescriptions are dispensed as unbranded generics for 2020 (adjusted)

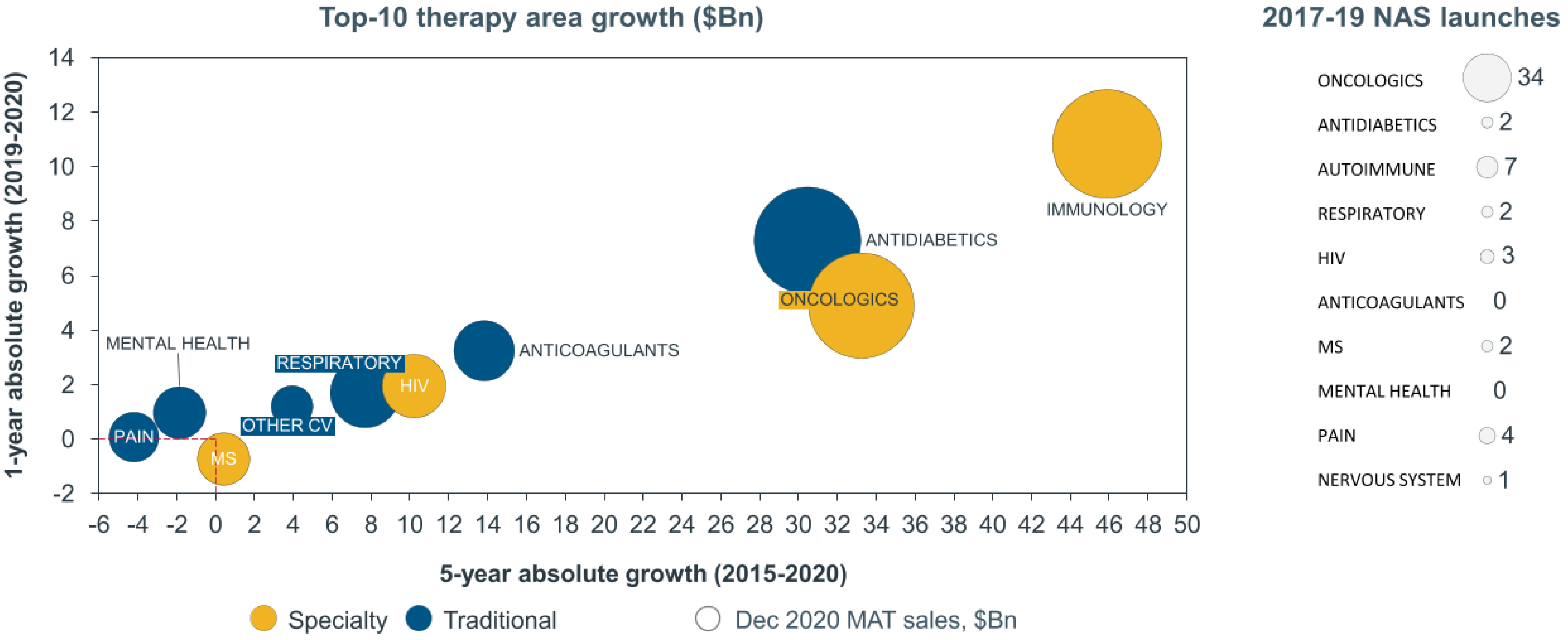
Unbranded and branded generics account for 18.9% of spending in 2020



Source: IQVIA, National Sales Perspectives, National Prescription Audit, December 2020
Note: Numbers may not add exactly to 100% due to rounding

Just three therapy areas are responsible for 60% of positive absolute growth in the US and 40% of recent launches

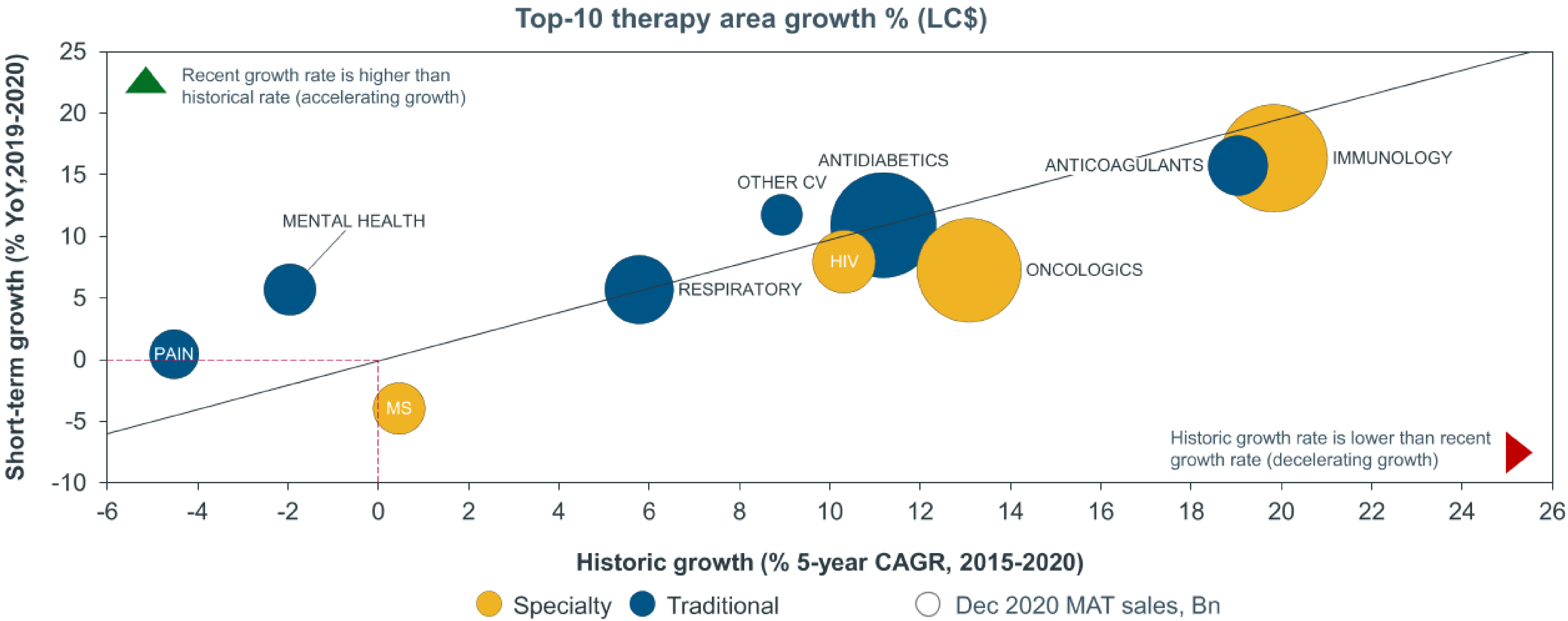
US total market absolute growth, $Bn



IQVIA NSP, Rx + OTC insulins only, Dec 2020 MAT; Notes: NAS = New active substance (recent launches with commercially valuable sales)

However, growth is now slowing in major therapy areas; specifically, oncology growth has slowed by 8% since prior year

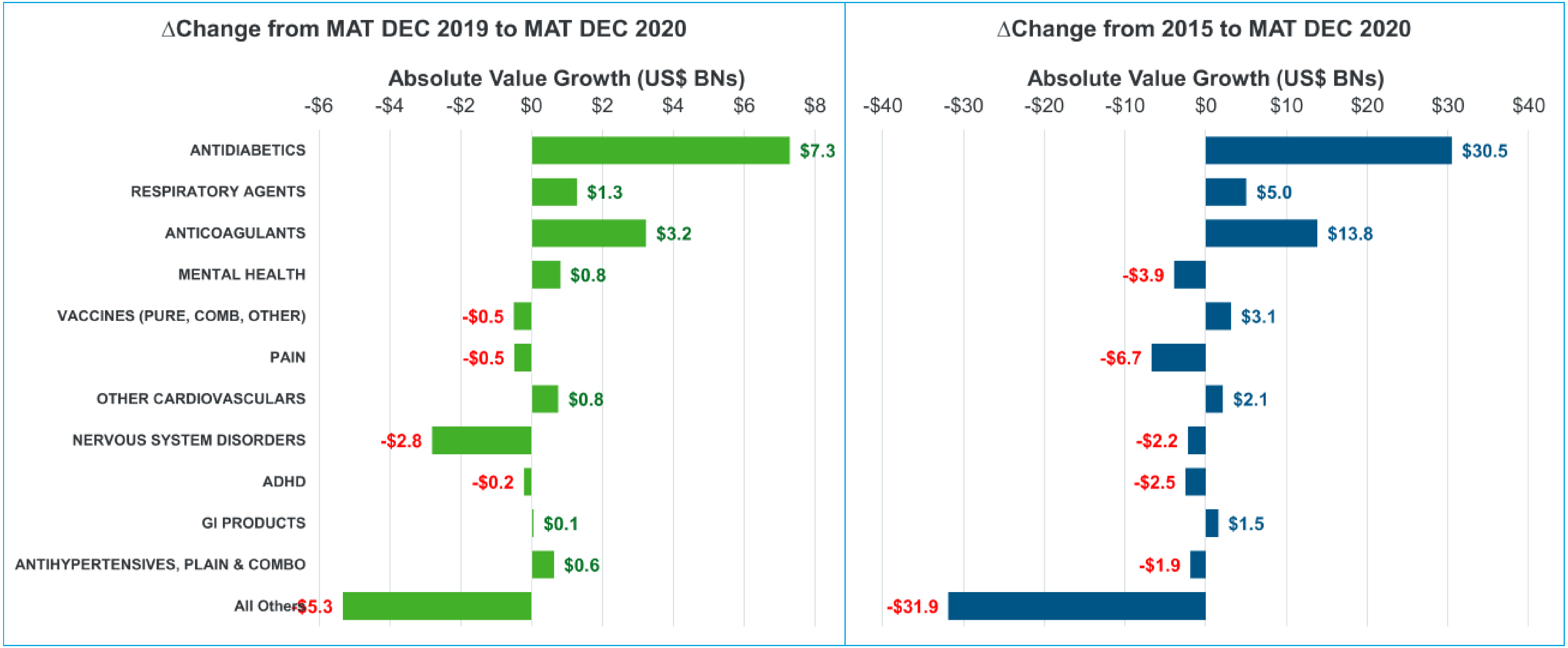
Slowing growth was occurring prior to COVID19, and is not the sole / core contributor



IQVIA NSP, Rx + OTC insulins only, Dec 2020 MAT; Notes: NAS = New active substance (recent launches with commercially valuable sales)

In 2020, anti-diabetics, anticoagulants, and respiratory led traditional absolute value growth while nervous system disorders, pain and vaccine contributed most to value decline

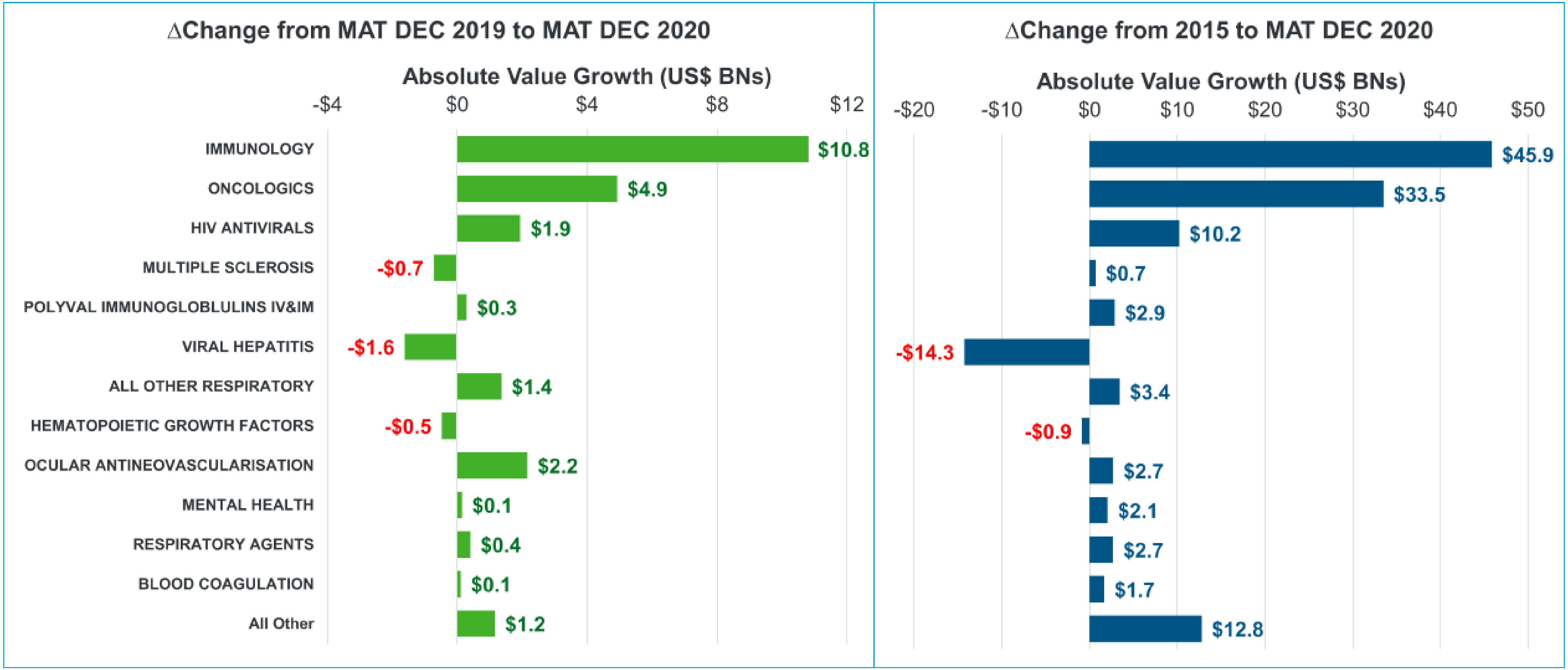
Absolute Value Growth for Top Traditional Therapy Areas



Source: IQVIA, National Sales Perspectives, December 2020
Note: top therapy areas ranked on MAT December 2020 non-discounted spend
*For Client's internal use only

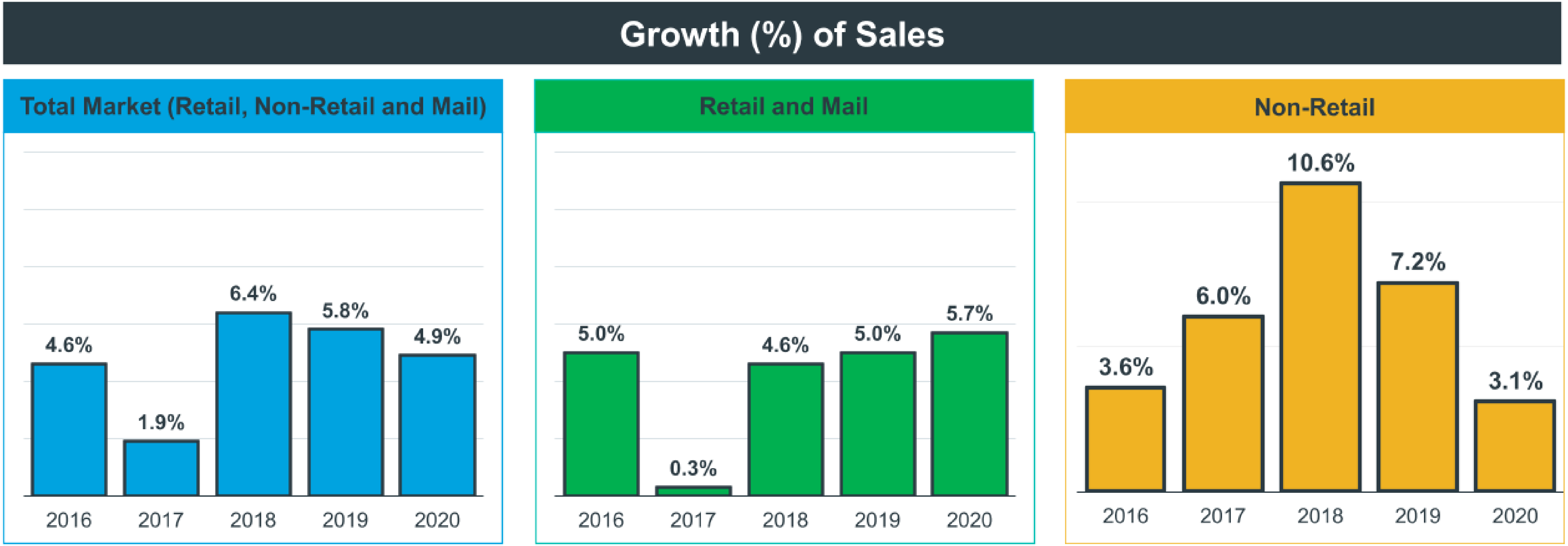
Immunology, Oncology, and HIV lead specialty absolute value growth

Absolute Value Growth for Top Specialty Therapy Areas



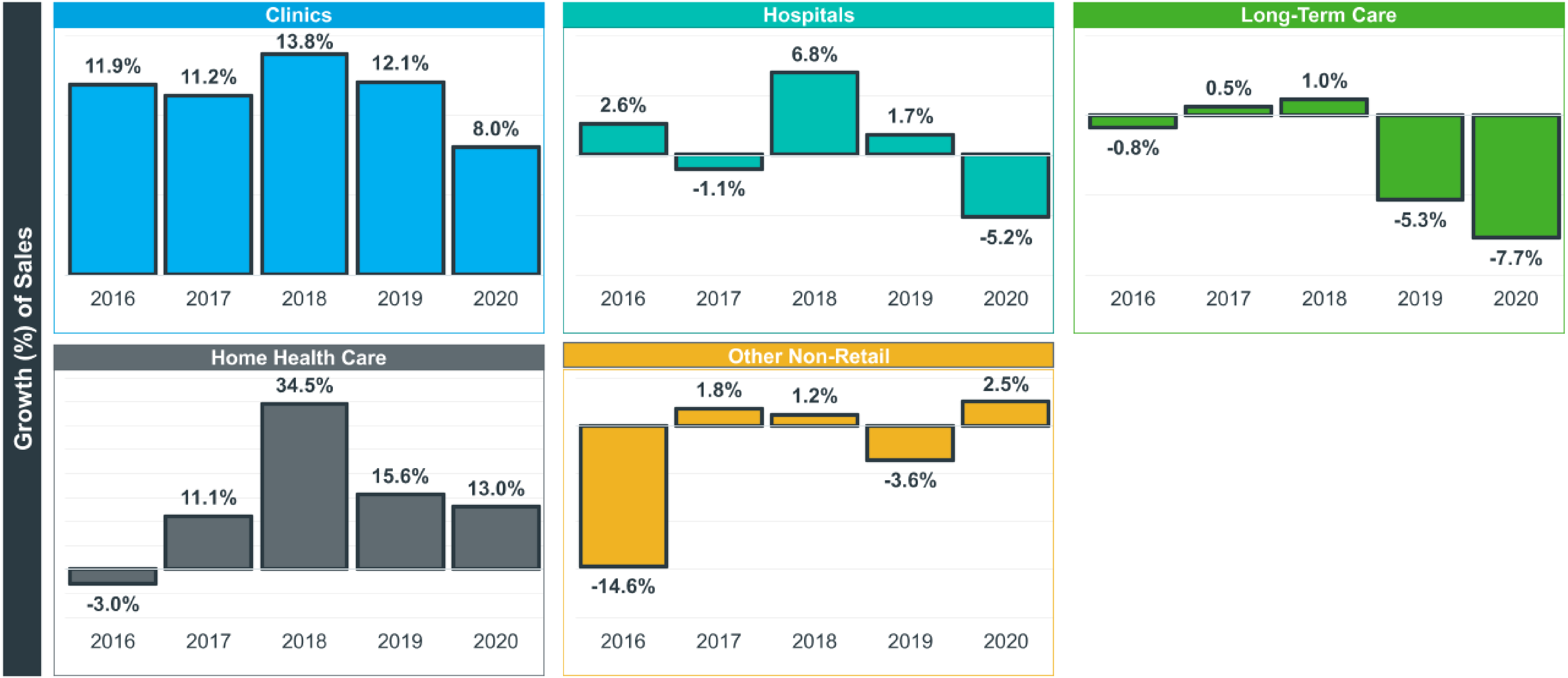
Source: IQVIA, National Sales Perspectives, December 2020
Note: top therapy areas ranked on MAT December 2020 non-discounted spend
*For Client's internal use only

The Non-Retail channel has been affected the most by COVID-19



Source: IQVIA, National Sales Perspectives, November 2020
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

Hospitals and Long Term Care have been most affected by COVID-19 while Home Health Care is booming!



Source: IQVIA, National Sales Perspectives, November 2020
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

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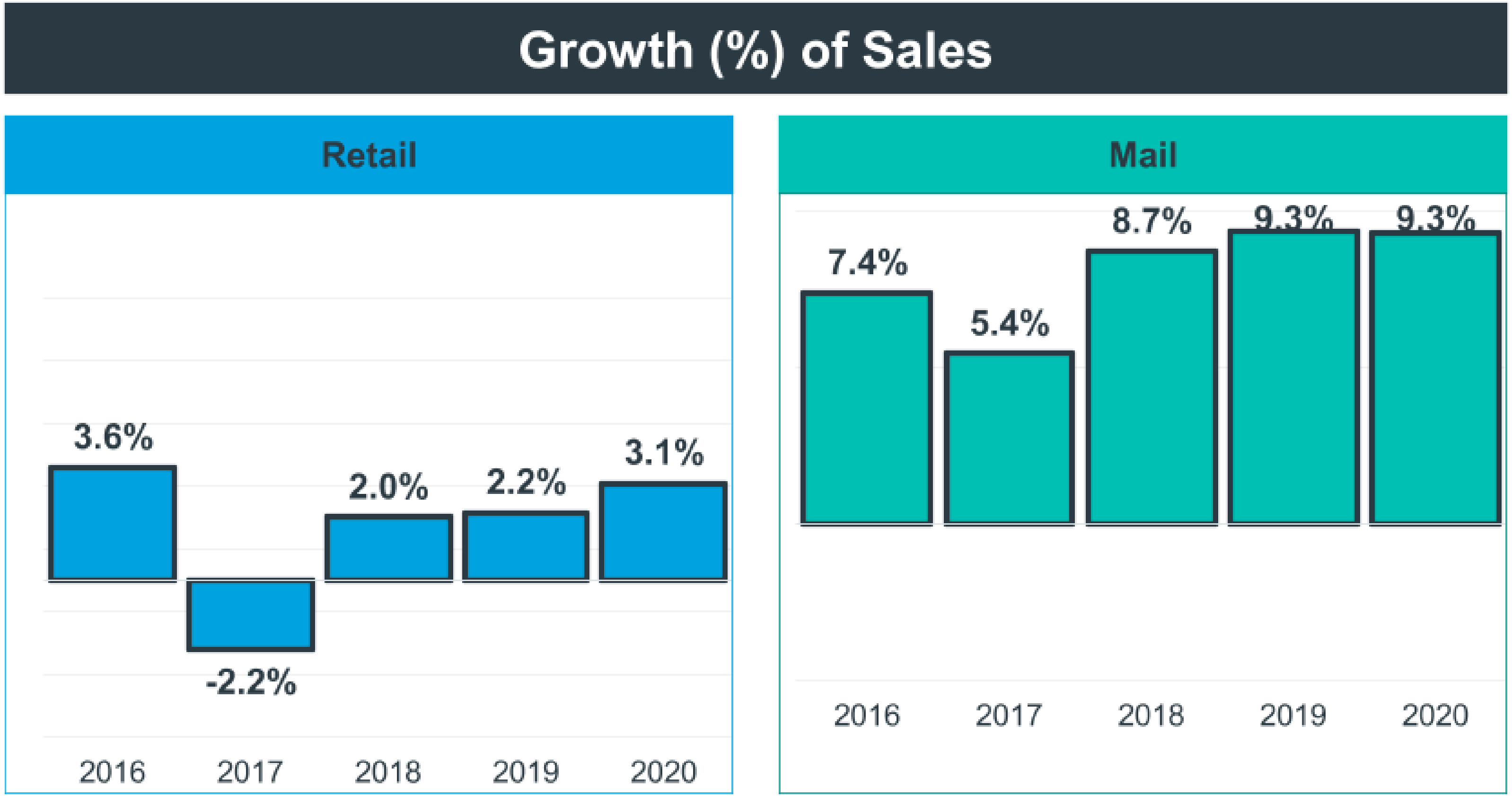
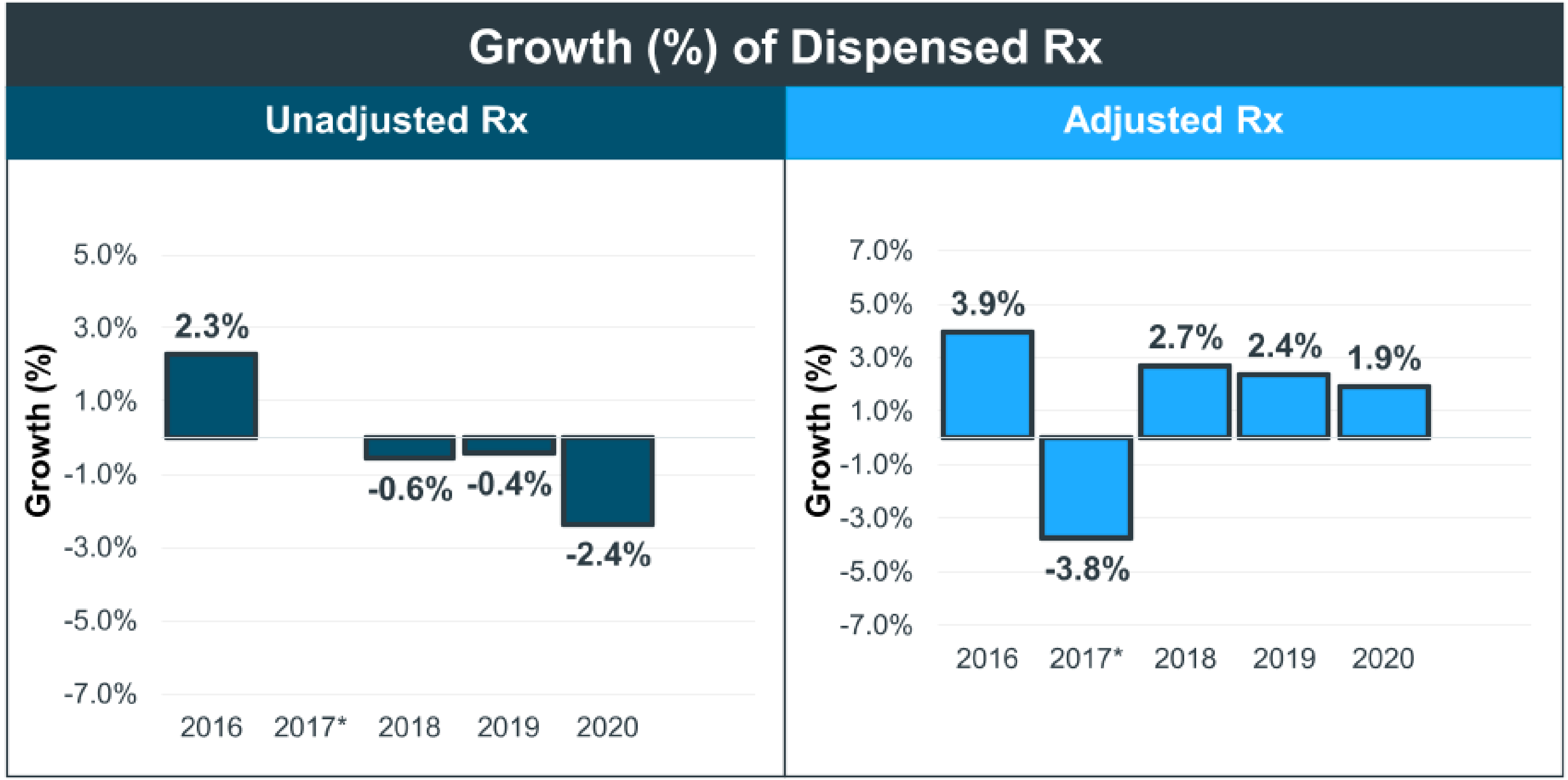
Mail has strong dollar growth because of Specialty products



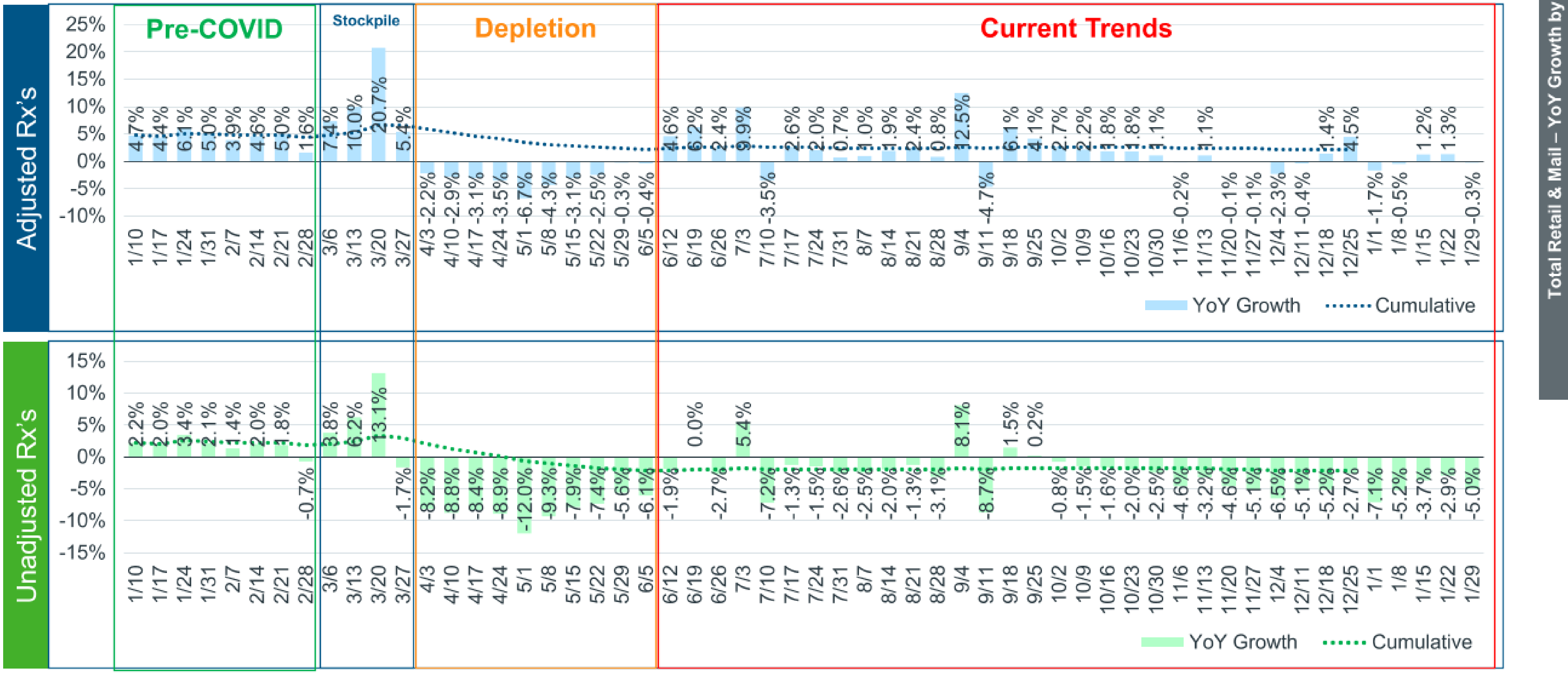
Source: IQVIA, National Sales Perspectives, November 2020
Note: Limited to Rx and OTC Insulins; Includes Retail, Non-Retail and Mail

For 2020 Unadjusted Rx growth is negative while Adjusted Rx was 1.9%



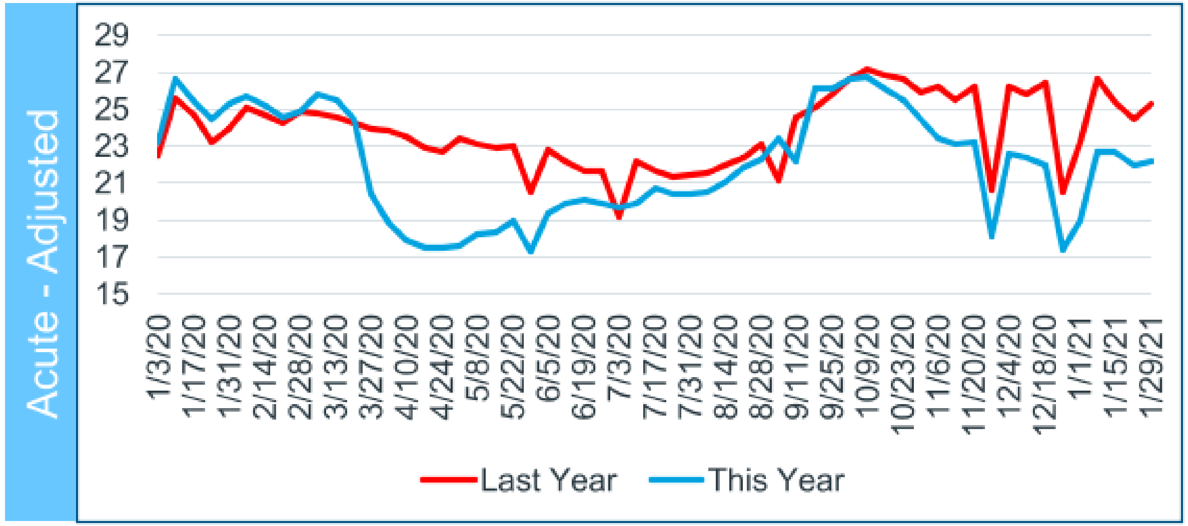
Source: IQVIA, National Prescription Audit & RxInsight, December 2020; Retail, Mail, and LTC limited to Rx and OTC Insulins
*Note: Declines between 2016 and 2017 are due to VRAF enhancement from 2017 onwards

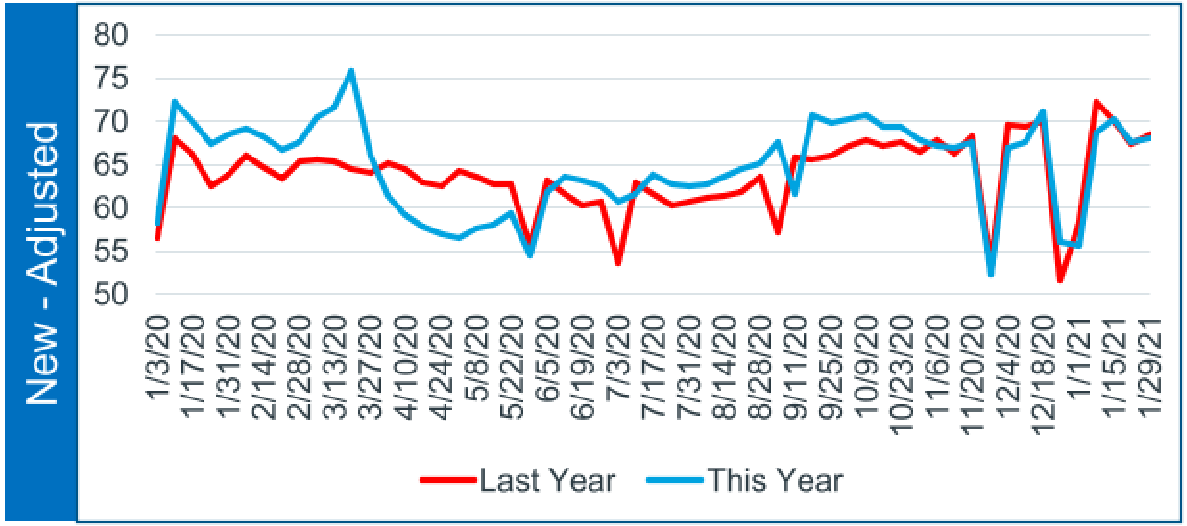
Adjusted prescription trends have slowed and only been positive 5 weeks out of the last 13 weeks

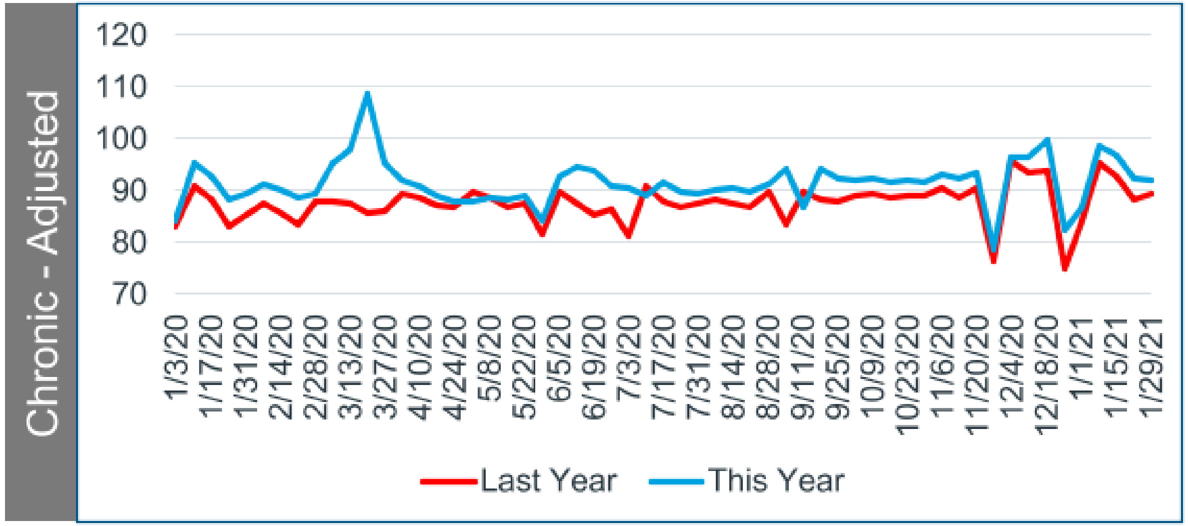


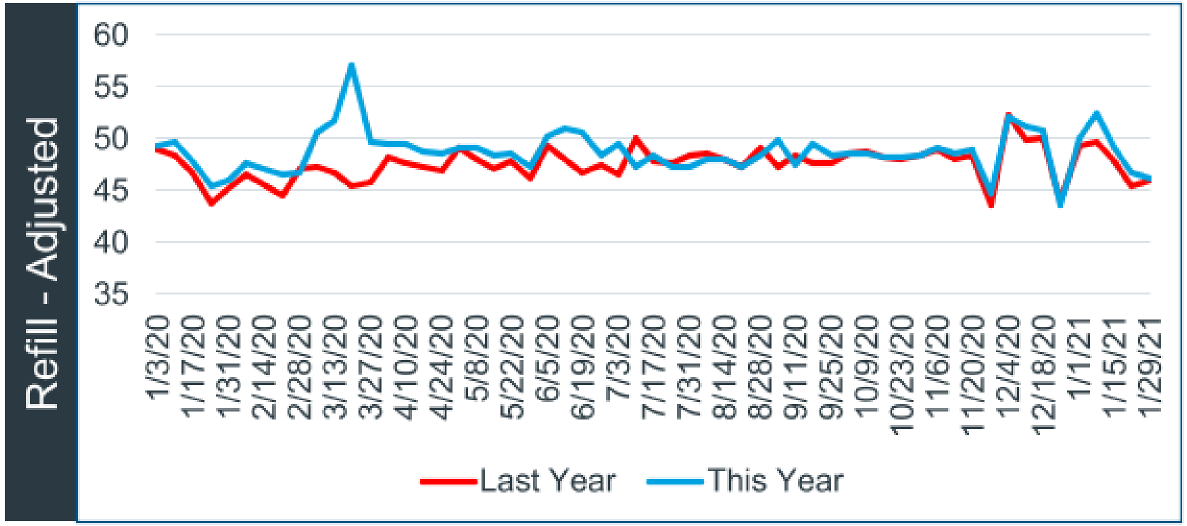
Data Source: IQVIA Xponent ®

Acute volumes continue to run below last year while Chronic volumes are running above last year









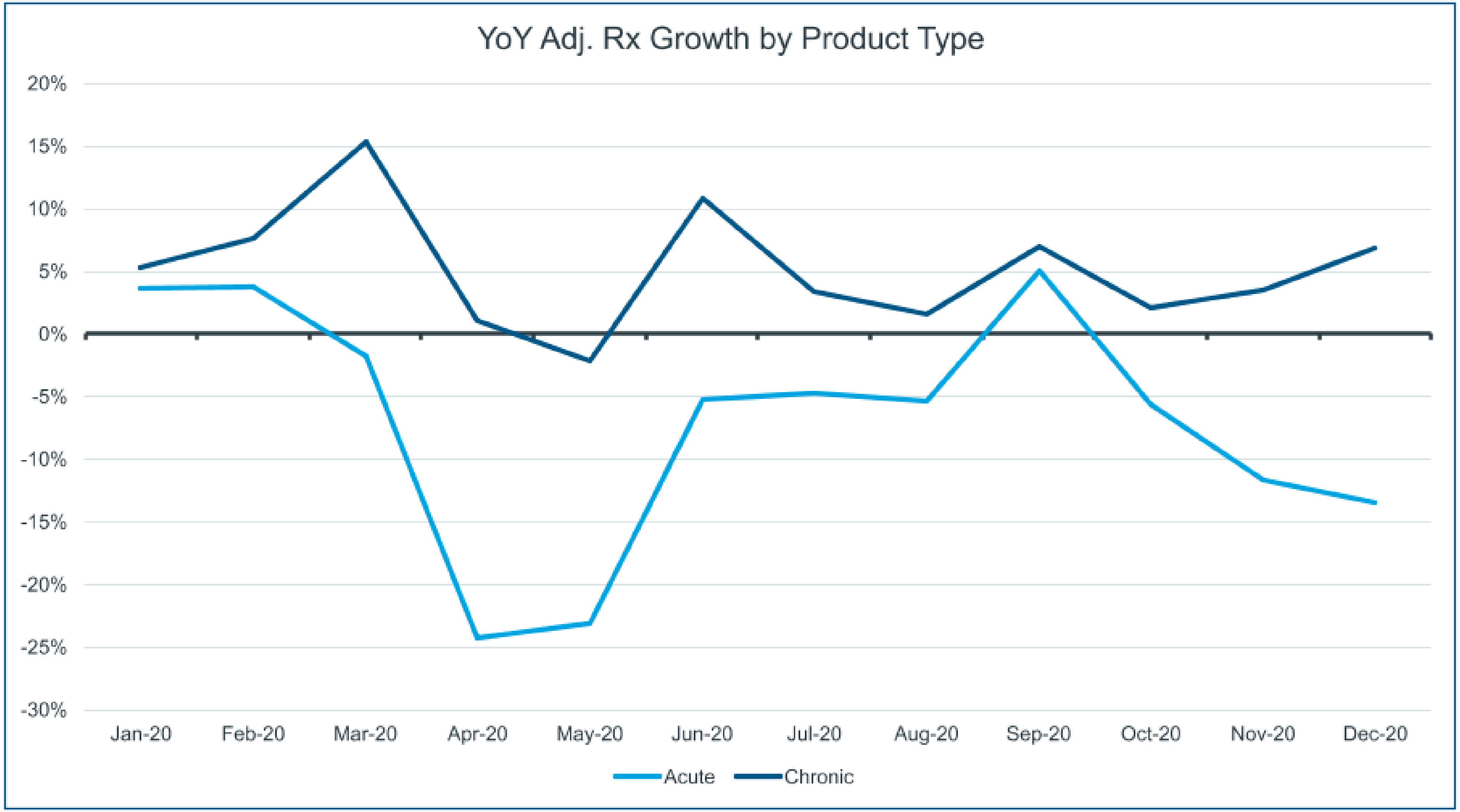
All Rx's shown in Millions

Data Source: IQVIA Xponent ®

Total Retail & Mail – Acute/Chronic & New/Refill – Adjusted Rx's

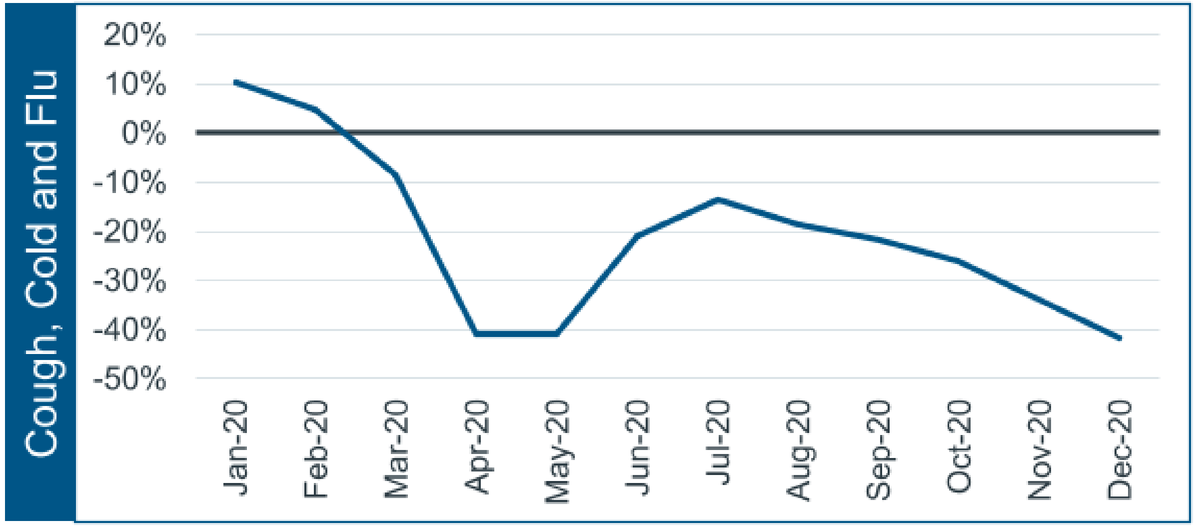
IQVIA

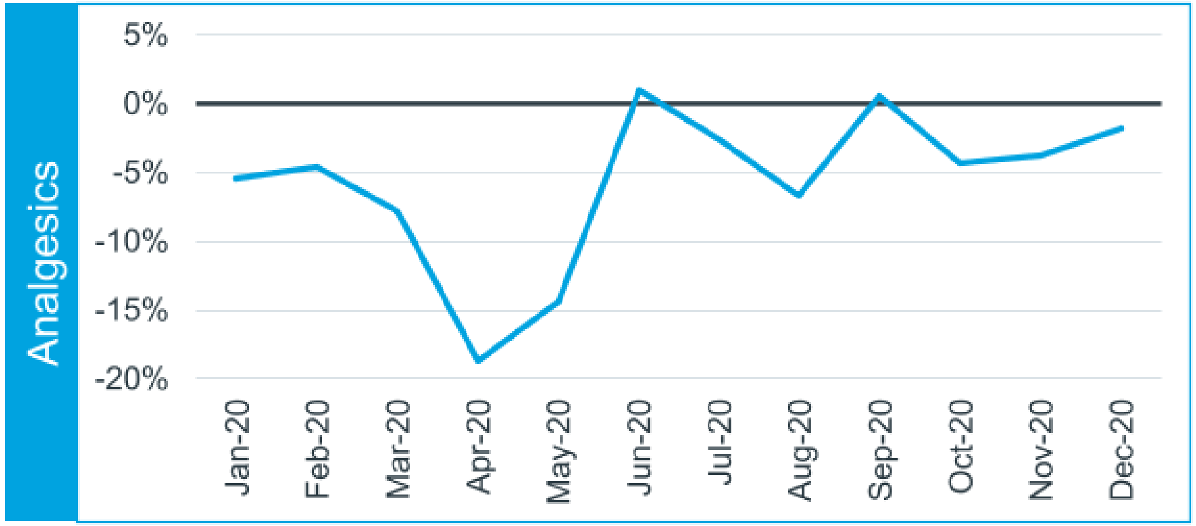
While Chronic scripts remained positive on a YoY basis, Acute scripts ran negative for much of the year

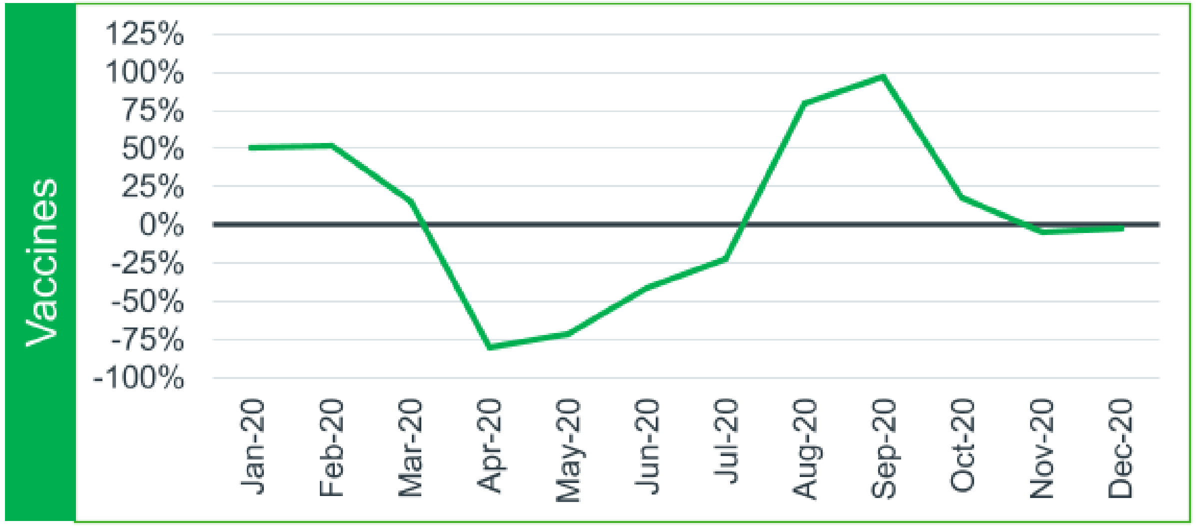


IQVIA

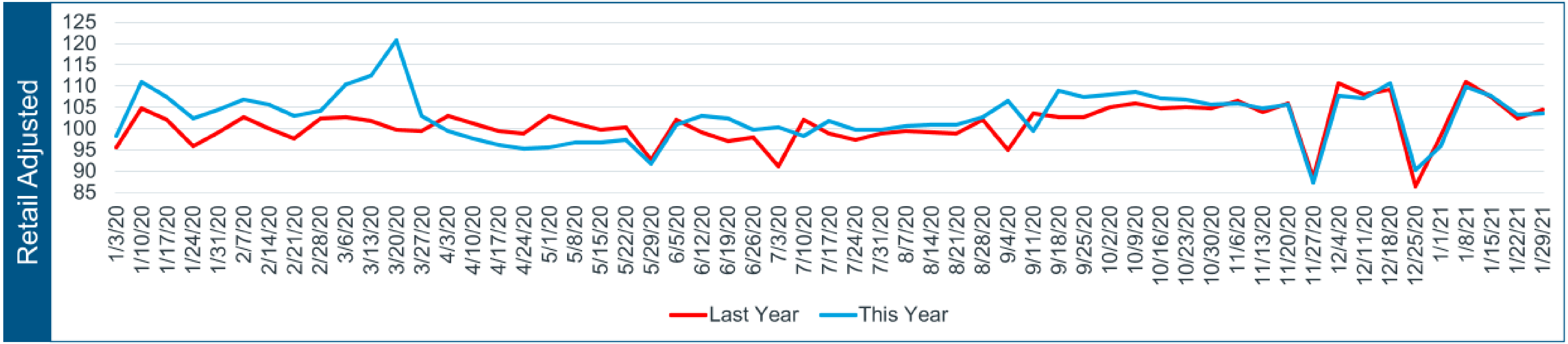
The recent recovery of acute scripts was solely due to Flu vaccines

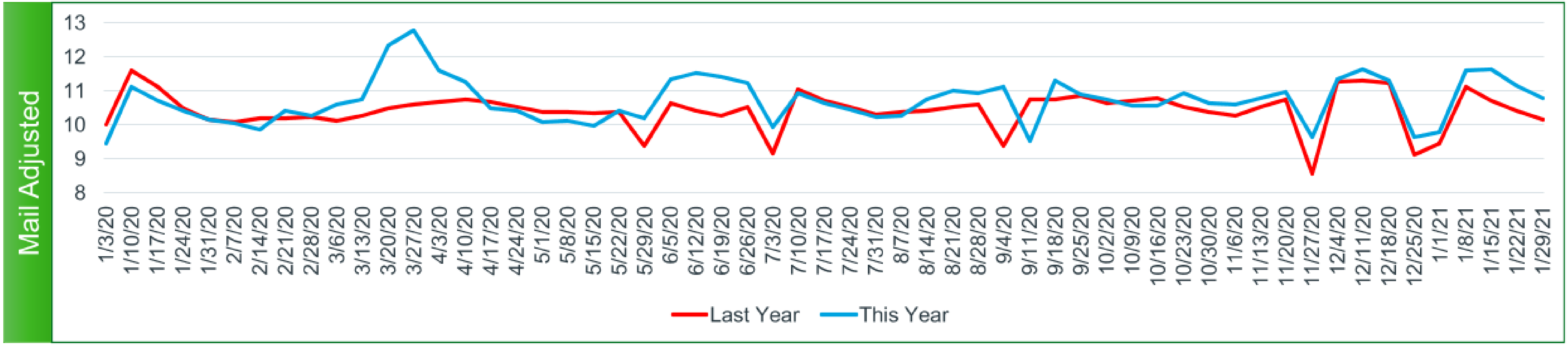






Retail volumes are running close to last year's levels while Mail volumes are running slightly ahead of last year's levels

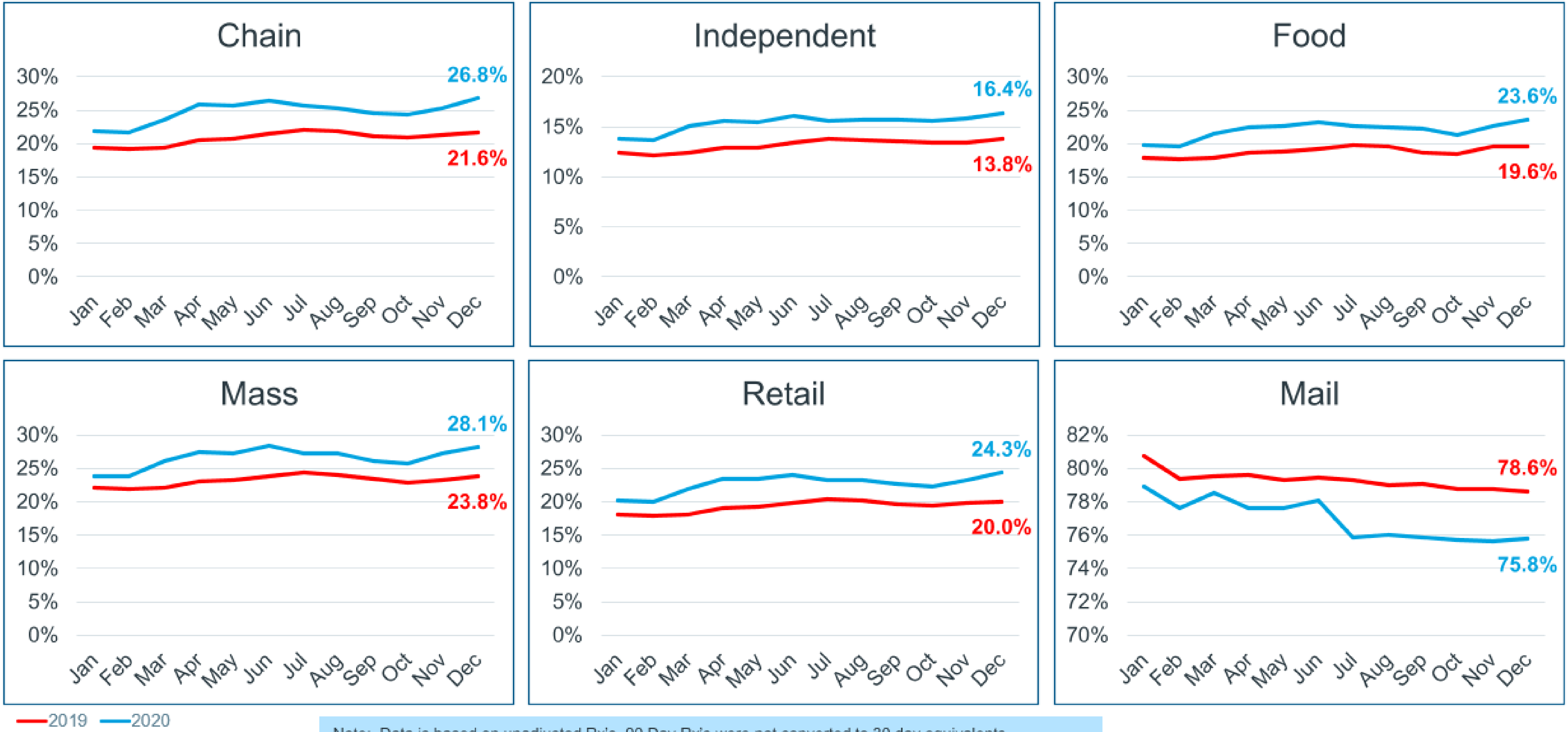




All Rx's shown in Millions

Data Source: IQVIA Xponent ®

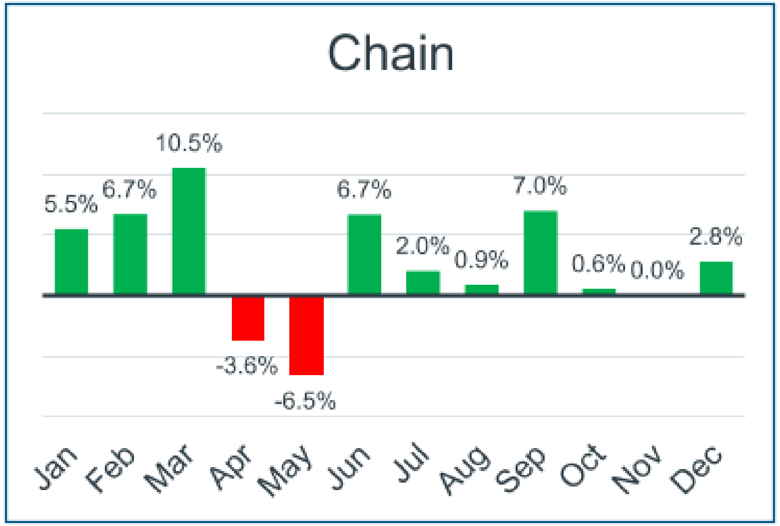
As a percent of total Rx's, 90 Day Rx's continue to run above 2019 percentages with the exception of Mail

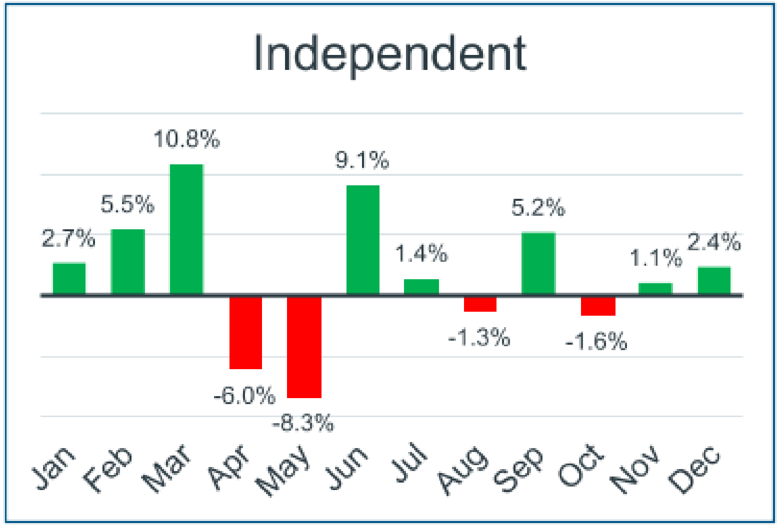


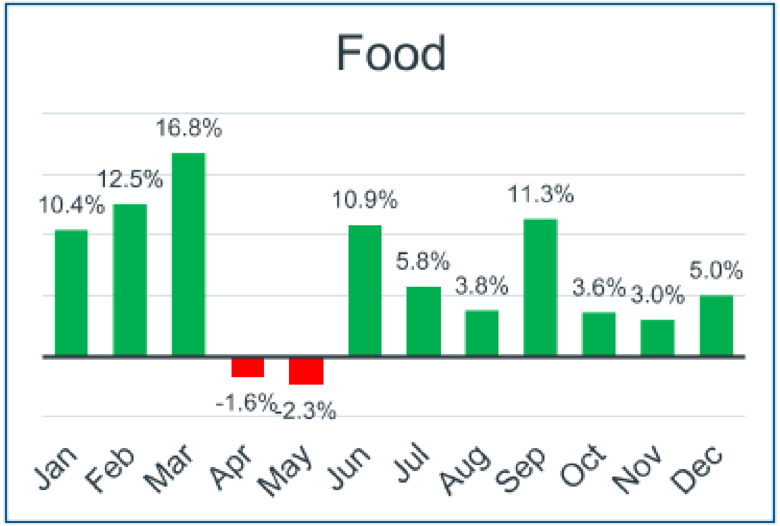
Note: Data is based on unadjusted Rx's, 90 Day Rx's were not converted to 30 day equivalents

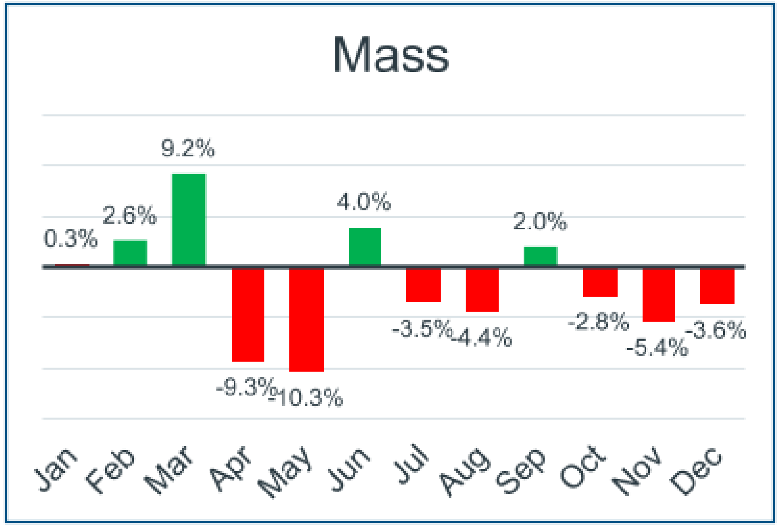
IQVIA

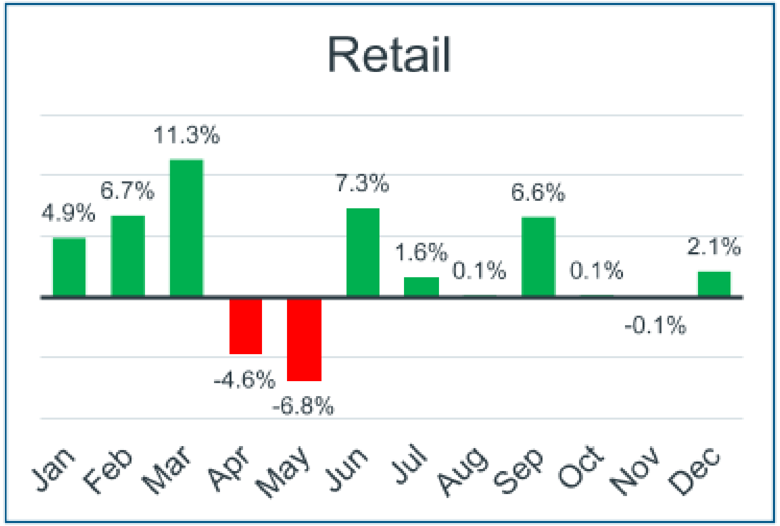
Adjusted YoY Rx Growth was positive in December for all with the exception of Mass Merchandisers

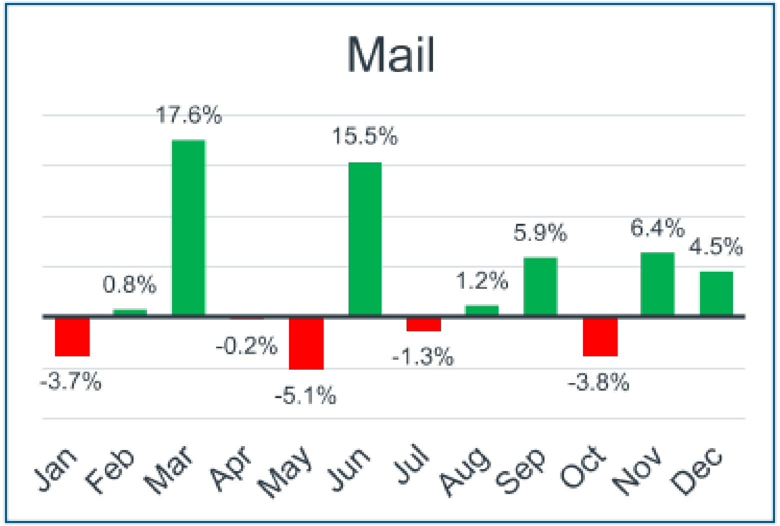






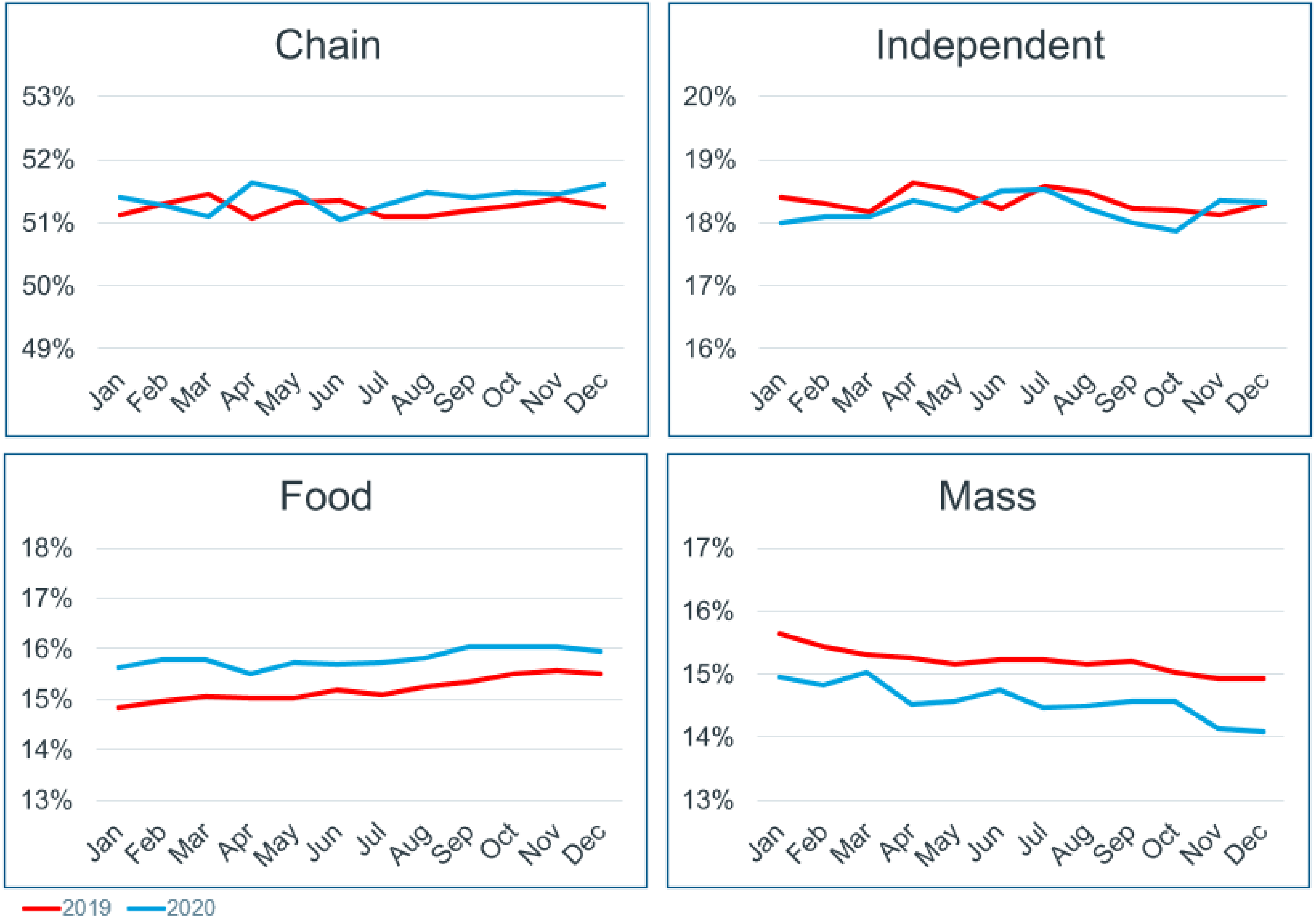






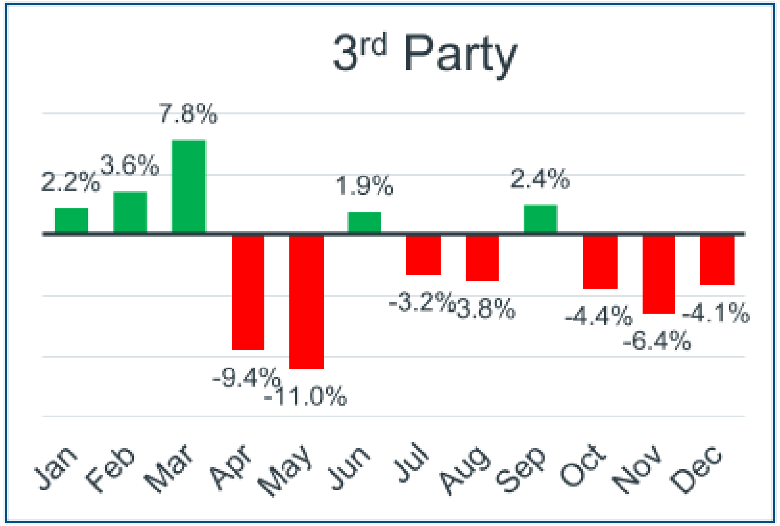
Note: 90 Day Rx's were converted to 30 day equivalents

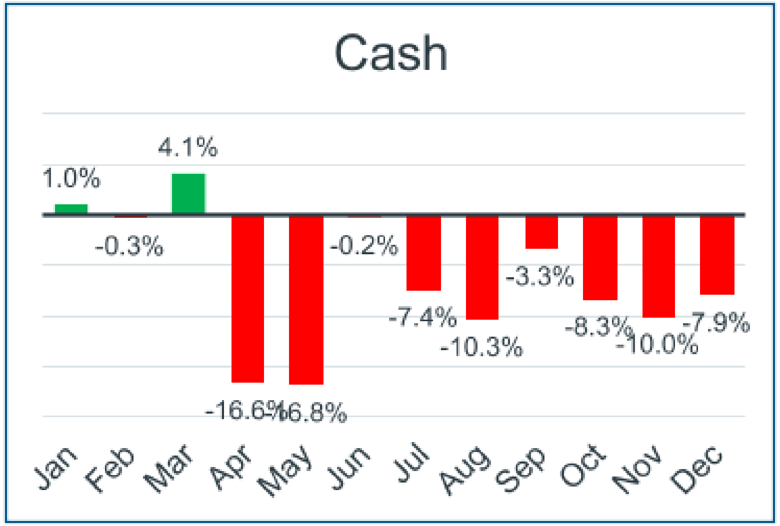
Based on adjusted Rx's market share, Food has gained share while Mass has lost share, Chain and Independent remain stable

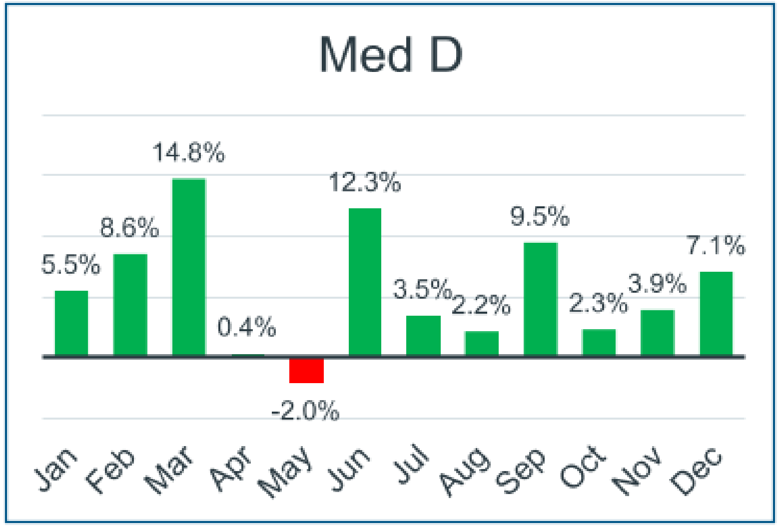


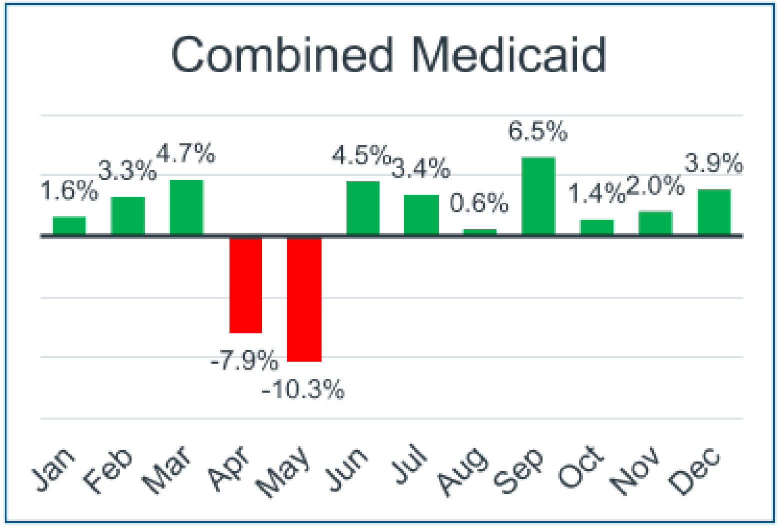
Note: 90 Day Rx's were converted to 30 day equivalents

On an adjusted Rx basis, Med D and Combined Medicaid have been positive since June while Discount Cards have been positive all year





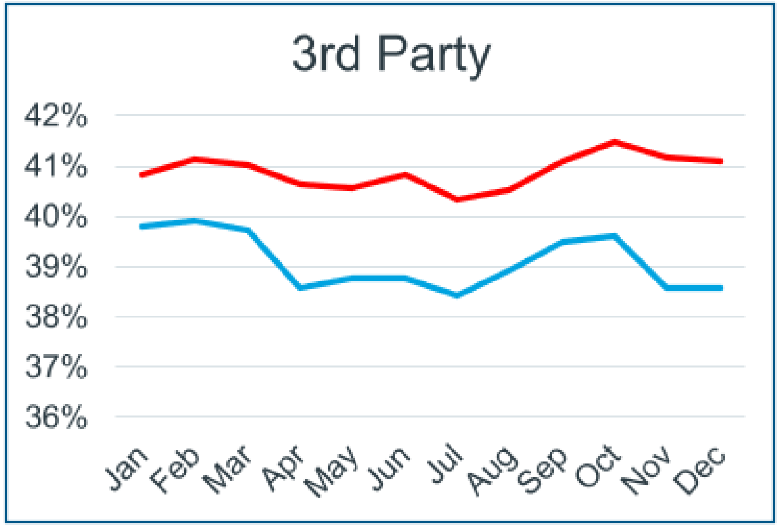


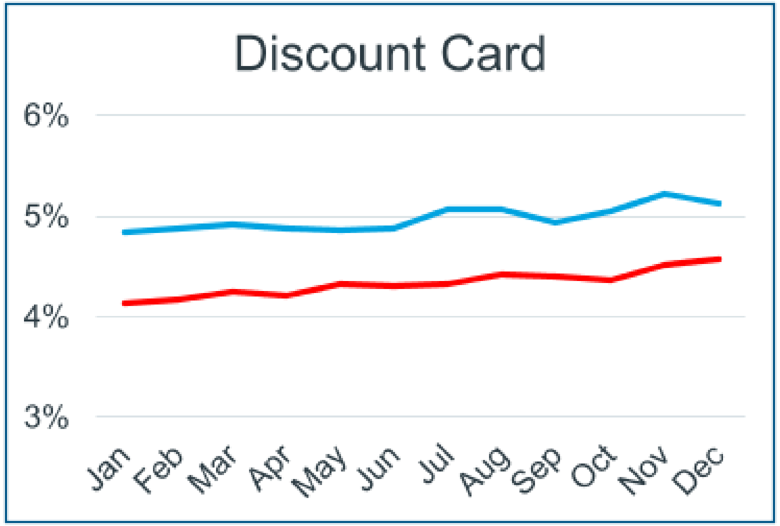


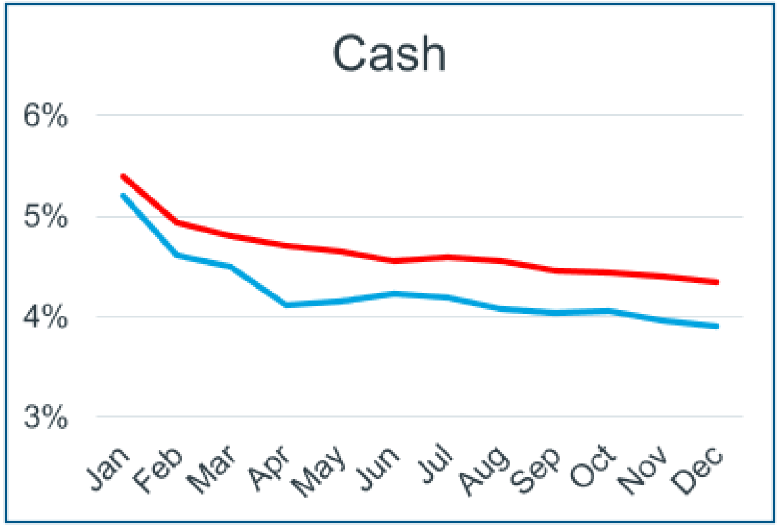
Note:
- 90 Day Rx's were converted to 30 day equivalents
- Discount Card volumes have been removed from 3rd Party

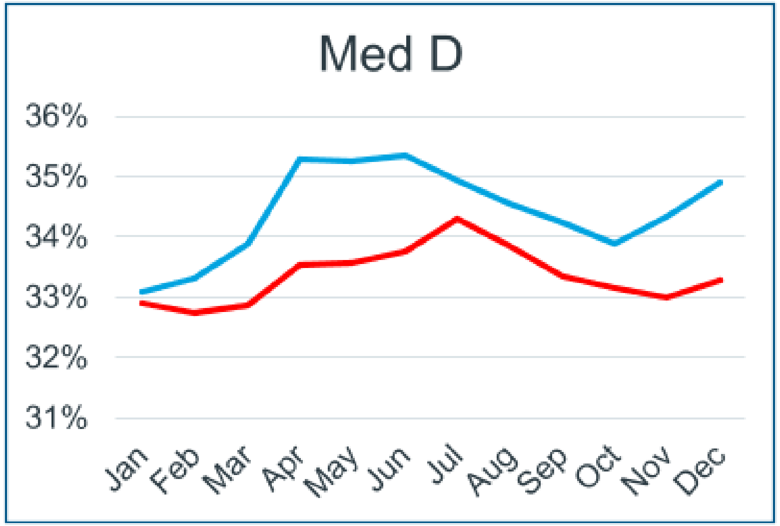
IQVIA

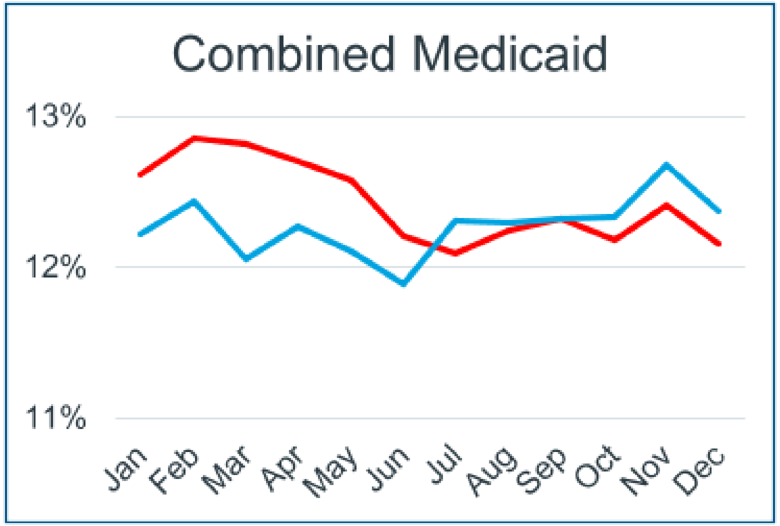
As a percent of total Adj. Rx's Discount Cards and Med D have been running above 2019 levels while Medicaid has surpassed 2019 levels since July











Note: 90 Day Rx's were converted to 30 day equivalents

2019 2020

IQVIA

On an script basis, the top 10 therapy areas are growing at 2.4% adjusted and declining at -2.4% unadjusted

Rank	Therapy Area	Adjusted Scripts (MNs)				Unadjusted Scripts (MNs)			
		MAT DEC 2020	Market Share	ABS Growth	Growth	MAT DEC 2020	Market Share	ABS Growth	Growth
1	ANTIHYPERTENSIVES	1,251.6	20.8%	53.7	4.5%	652.0	15.9%	-7.7	-1.2%
2	MENTAL HEALTH	579.6	9.6%	37.1	6.8%	402.8	9.8%	11.1	2.8%
3	LIPID REGULATORS	504.7	8.4%	27.7	5.8%	247.0	6.0%	1.7	0.7%
4	PAIN	402.2	6.7%	-15.9	-3.8%	368.5	9.0%	-17.6	-4.6%
5	ANTIDIABETICS	368.6	6.1%	19.7	5.6%	217.2	5.3%	2.6	1.2%
6	NERVOUS SYSTEM DISORDERS	255.5	4.2%	9.7	3.9%	196.3	4.8%	1.2	0.6%
7	ANTI-ULCERANTS	249.4	4.1%	1.4	0.6%	149.6	3.7%	-7.5	-4.8%
8	THYROID ANTI-THYROID AND IODINE PREPS	229.1	3.8%	6.0	2.7%	121.6	3.0%	-3.4	-2.7%
9	RESPIRATORY AGENTS	222.1	3.7%	9.3	4.4%	176.0	4.3%	1.9	1.1%
10	ANTIBACTERIALS	200.4	3.3%	-50.2	-20.0%	197.0	4.8%	-50.4	-20.4%
TOP 10		**4,263.2**	**70.7%**	**98.5**	**2.4%**	**2,728.2**	**66.7%**	**-68.0**	**-2.4%**

Source: IQVIA, RxInsight, December 2020
Limited to Rx and OTC Insulins
*For Client's internal use only

On an script basis, the top 20 therapy areas are growing at 2.3% adjusted and declining at -2.0% unadjusted

Rank	Therapy Area	Adjusted Scripts (MNs) MAT DEC 2020	Adjusted Market Share	Adjusted ABS Growth	Adjusted Growth	Unadjusted Scripts (MNs) MAT DEC 2020	Unadjusted Market Share	Unadjusted ABS Growth	Unadjusted Growth
11	OTHER CNS	187.9	3.1%	4.6	2.5%	171.3	4.2%	2.0	1.2%
12	HORMONAL CONTRACEPTION	124.8	2.1%	1.8	1.5%	70.9	1.7%	-3.6	-4.8%
13	ANTICOAGULANTS	122.3	2.0%	3.6	3.0%	75.8	1.9%	-1.3	-1.6%
14	DERMATOLOGICS	114.7	1.9%	0.5	0.5%	110.0	2.7%	-0.2	-0.2%
15	VITAMINS & MINERALS	105.0	1.7%	2.0	1.9%	65.7	1.6%	-2.0	-3.0%
16	ADHD	104.6	1.7%	1.9	1.8%	94.8	2.3%	0.6	0.6%
17	BPH (BENIGN PROSTATIC HYPERTROPHY)	85.0	1.4%	3.7	4.5%	44.0	1.1%	-0.3	-0.7%
18	VACCINES (PURE, COMB, OTHER)	70.2	1.2%	14.1	25.2%	68.5	1.7%	14.4	26.6%
19	CORTICOSTEROIDS	69.2	1.1%	-11.7	-14.4%	63.9	1.6%	-12.0	-15.8%
20	OTHER CARDIOVASCULARS	66.6	1.1%	1.6	2.4%	44.2	1.1%	-1.2	-2.6%
TOP 20		**5,313.6**	**88.2%**	**120.6**	**2.3%**	**3,537.3**	**86.4%**	**-71.6**	**-2.0%**

Source: IQVIA, RxInsights, December 2020
Limited to Rx and OTC Insulins
*For Client's internal use only

Pharmacy Economics Rebound (A little) Amid Glimmers of Good News (Adam Fein Drug Channels)

NEGATIVE FACTORS

- Slow prescription growth and intense competition for consumers
- Low generic drug prices, which have restrained revenues and gross profits from these prescriptions
- Limited exposure to dispensing of specialty drugs
- Reduced margins from participating in payers' narrow retail pharmacy networks
- Lower reimbursements and store traffic from dispensing an increasing share of 90-day maintenance prescriptions
- Rapid growth DIR rebates to Medicare Part D plans
- Slower growth in brand name drug list prices
- Growing competition from technology-enabled online pharmacies, including Amazon and numerous venture capital backed start-ups

POSITIVE FACTORS

- Fee-for-Service Medicaid
- Rutledge v. PCMA

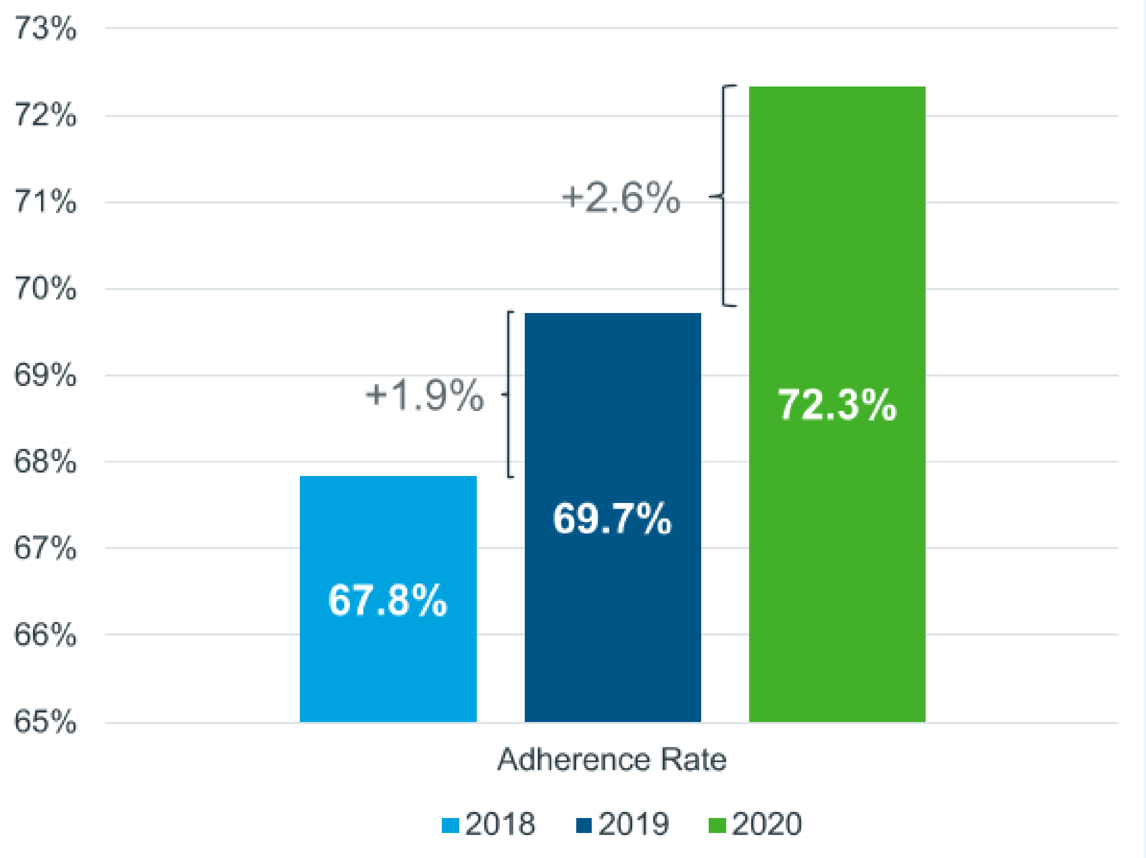
Adherence, Patients and Vaccines

At a national level, COVID does not appear to have negatively impacted adherence

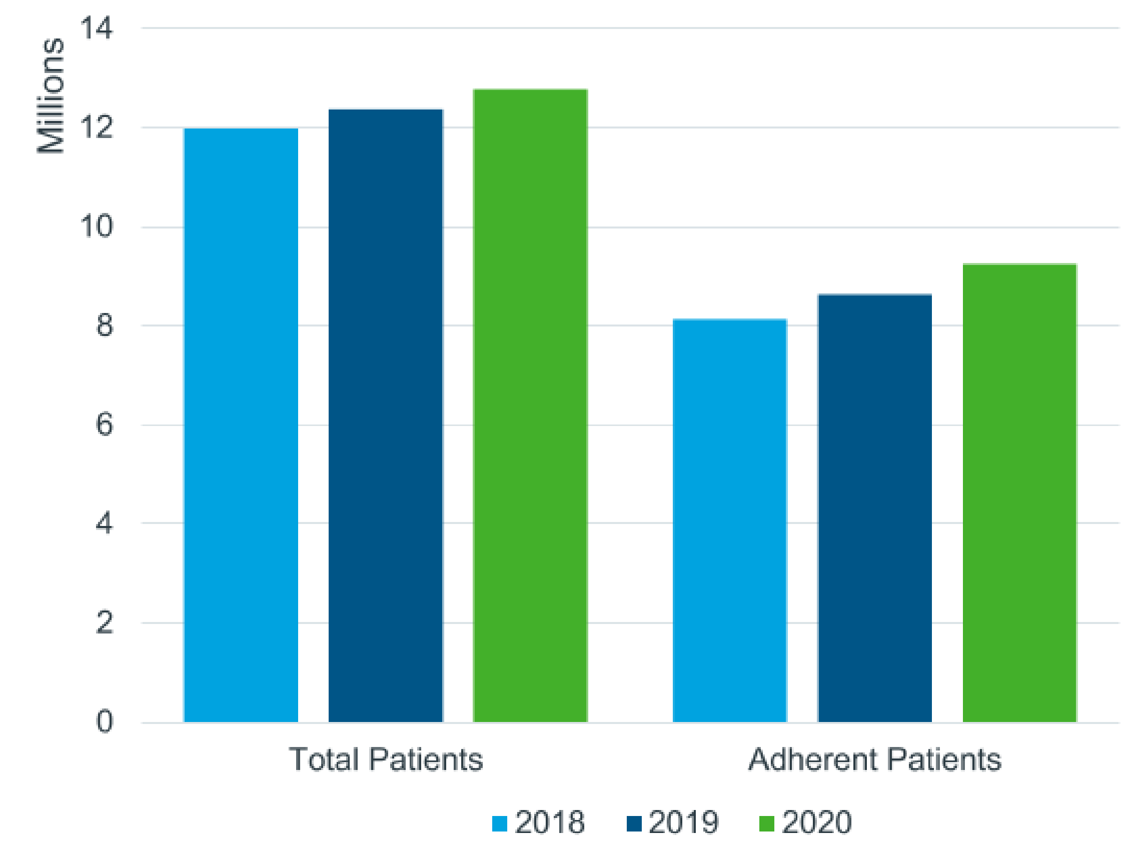
- Diabetes Adherence increased more in 2020 than 2019, vs. the previous 12 months

- Total patients grew 3.3% in both 2019 and 2020

Diabetes Adherence Rates 12 months ending November 2018-2020



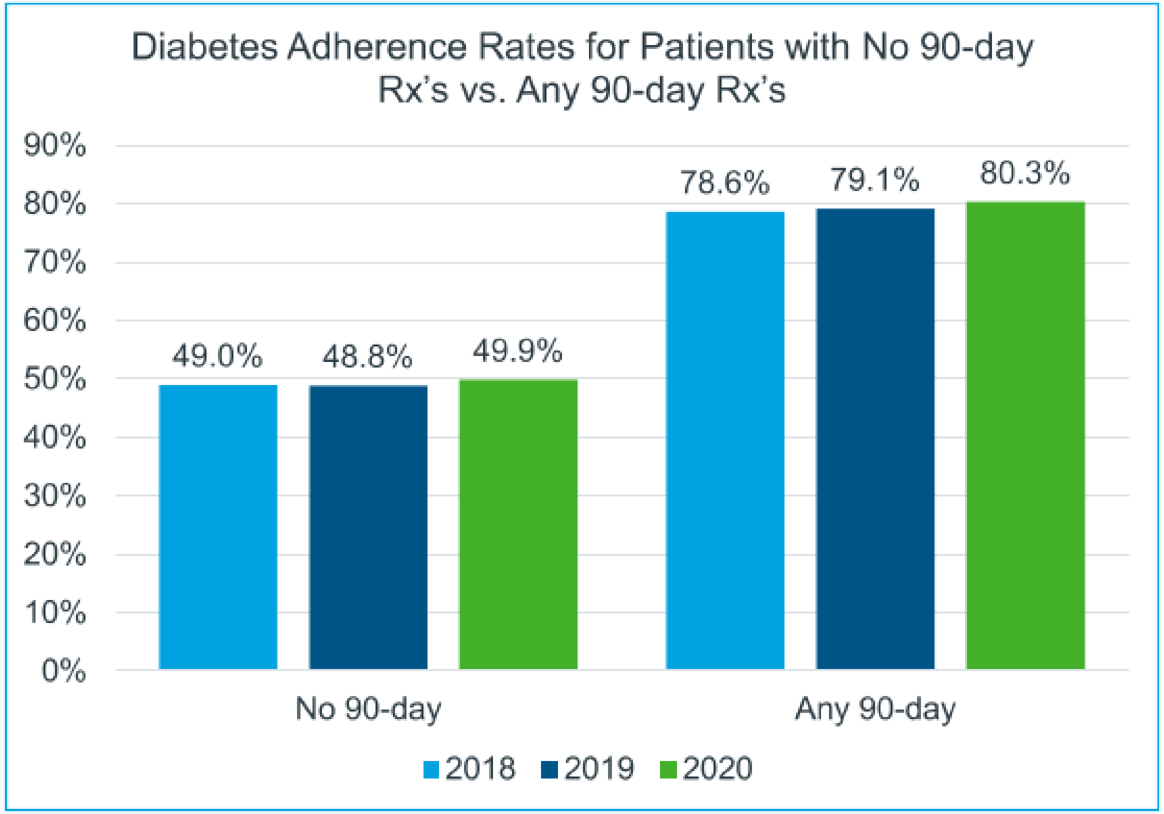
Total Eligible and Adherent Diabetes Patient Counts 12 months ending November 2018-2020



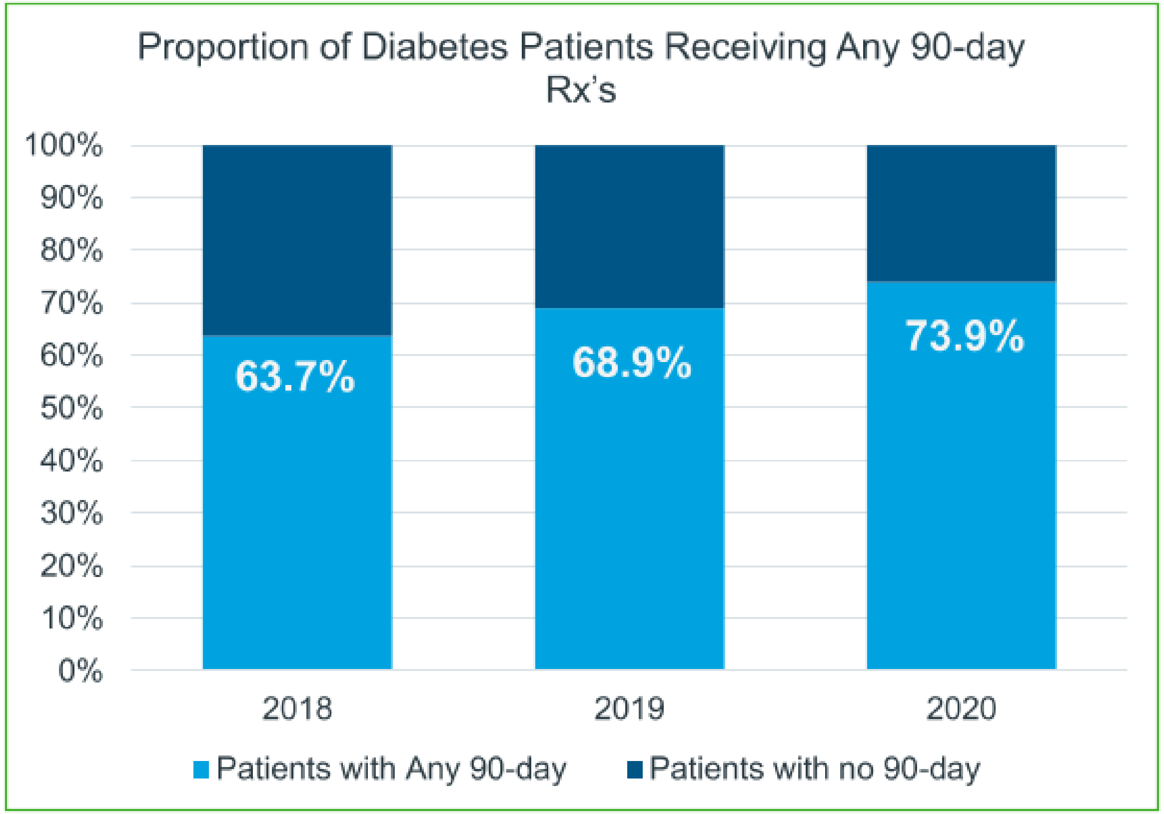
Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

90 Day usage continues to be a driver of increased adherence for Diabetes patients

Patients who receive at least one 90-day Rx have 25-30% higher adherence rates than those who do not

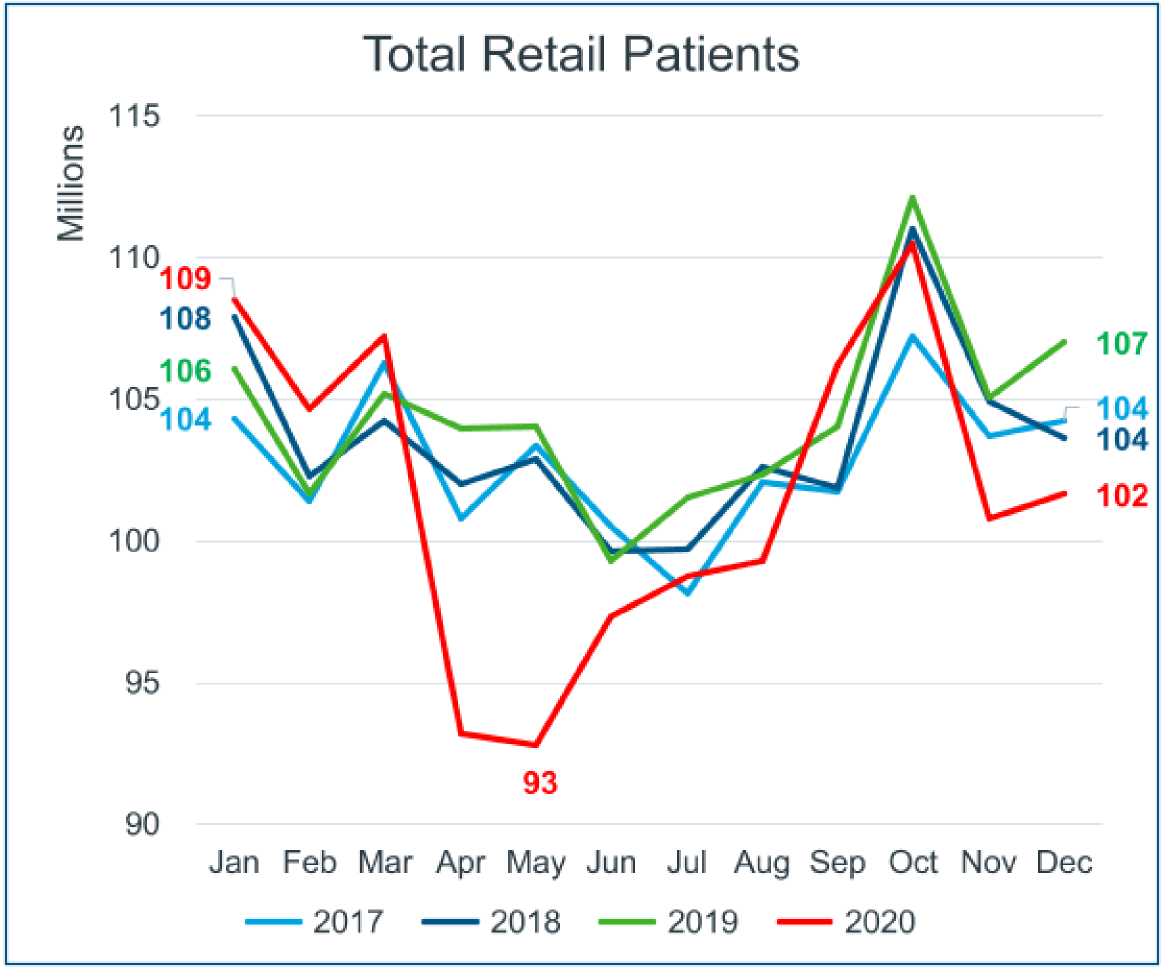


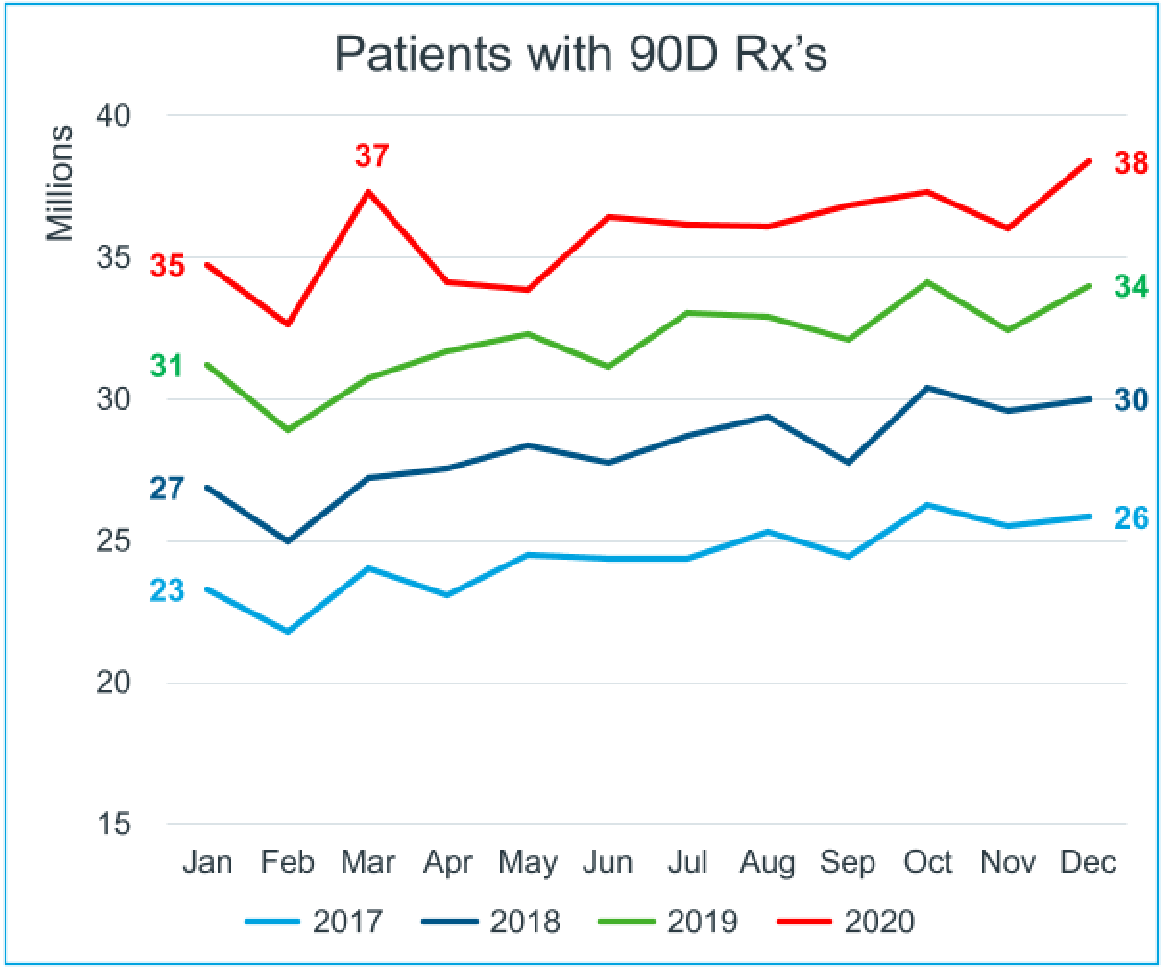
The proportion of patients who received at least one 90-day Rx continued to rise in 2020, with many patients hoping to eliminate additional trips to pharmacies during COVID



Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

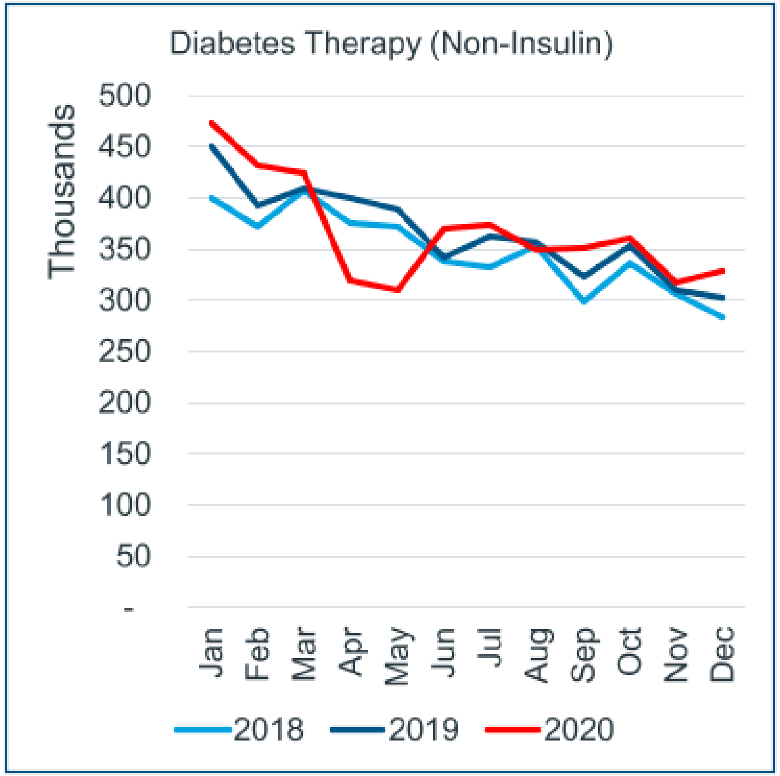
During the spring lockdowns the total number of Retail patients fell to 93M then rebounded in the fall

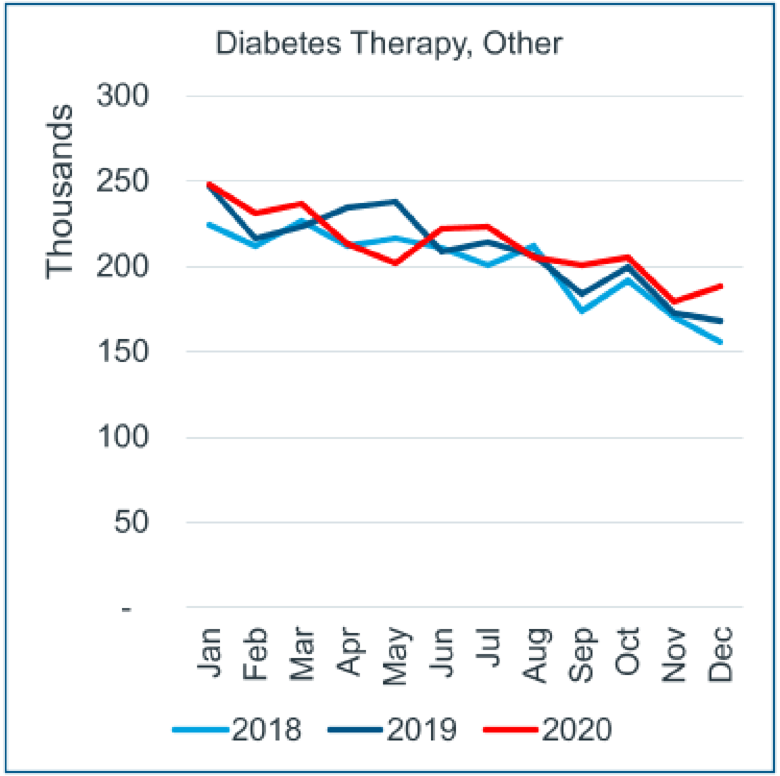


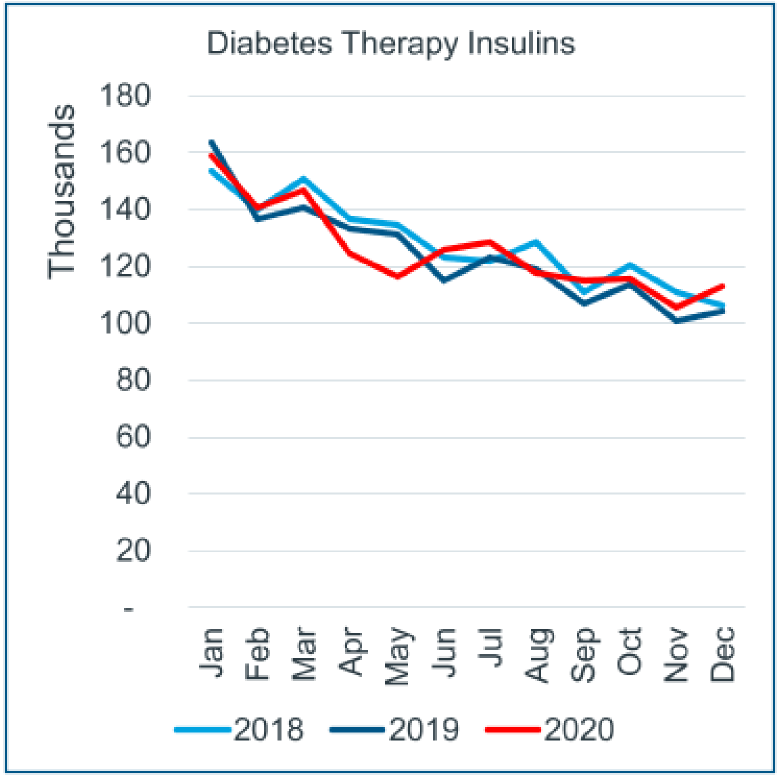


Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

After dropping in patient counts earlier in 2020, New to Therapy Diabetes patients bounced back and finished higher than 2019



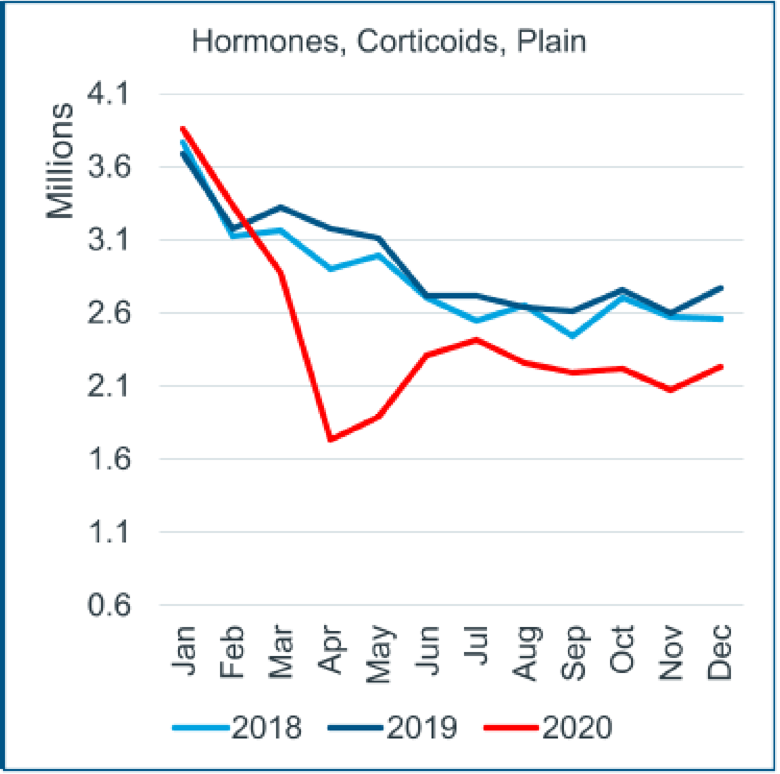


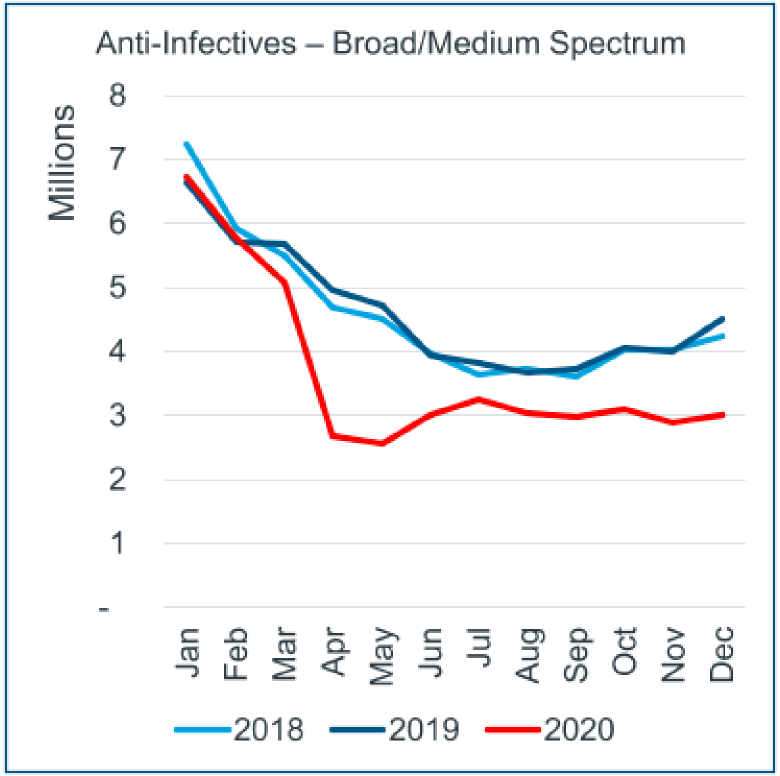


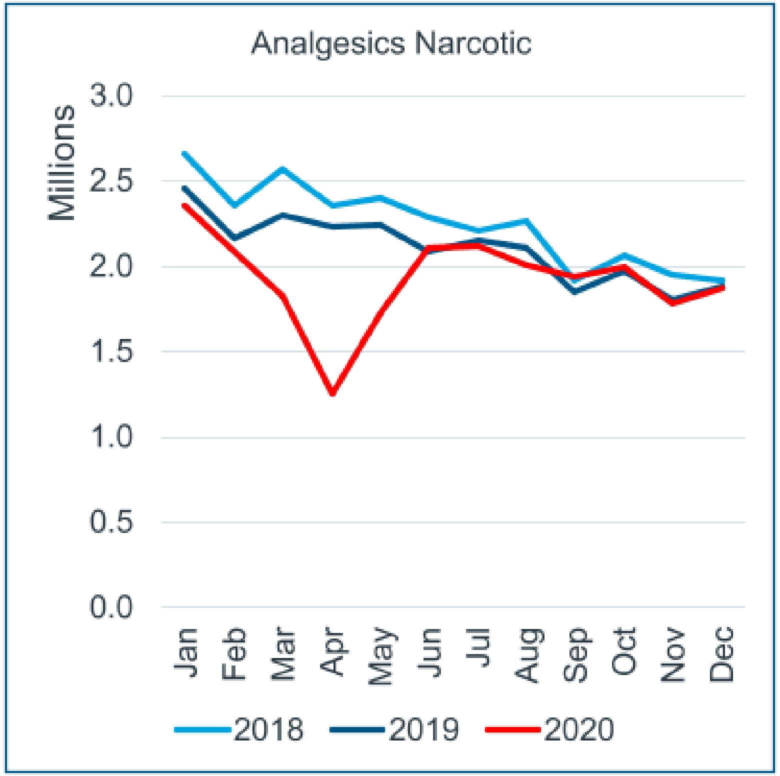
Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

Among the top 3 categories for New to Therapy patients, only Analgesics Narcotic recovered to 2019 levels

New to Therapy Patient Counts

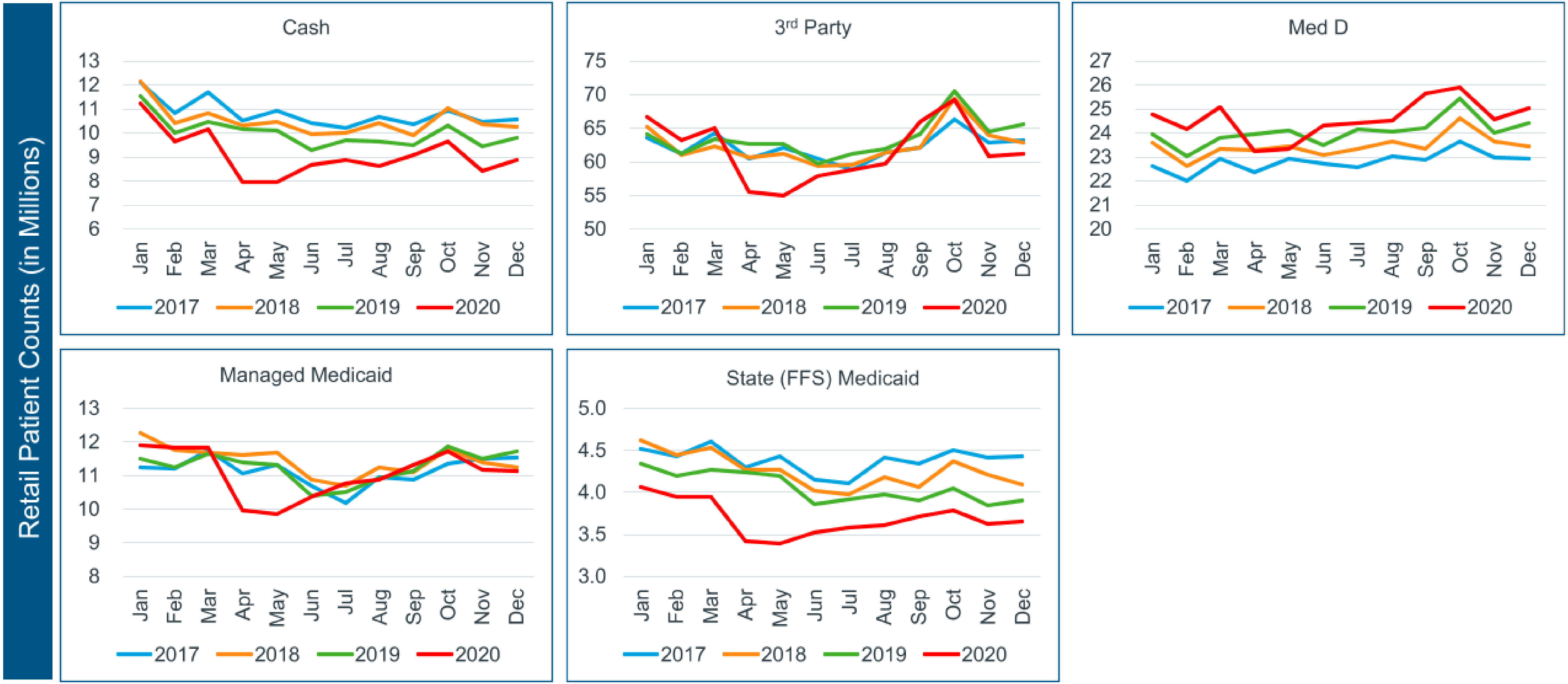






Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

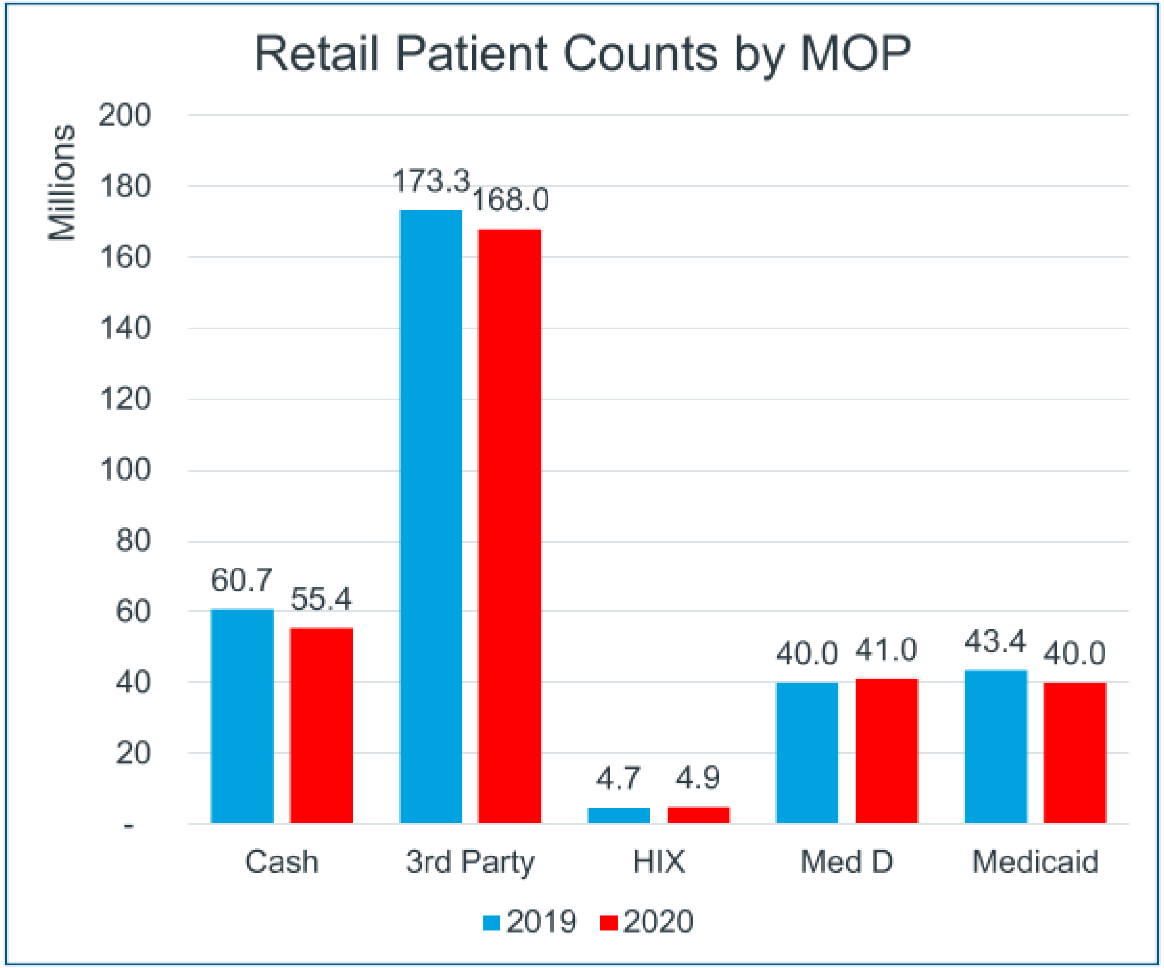
Reviewing the monthly retail patient trends for 2020, Med D numbers are running above the prior years

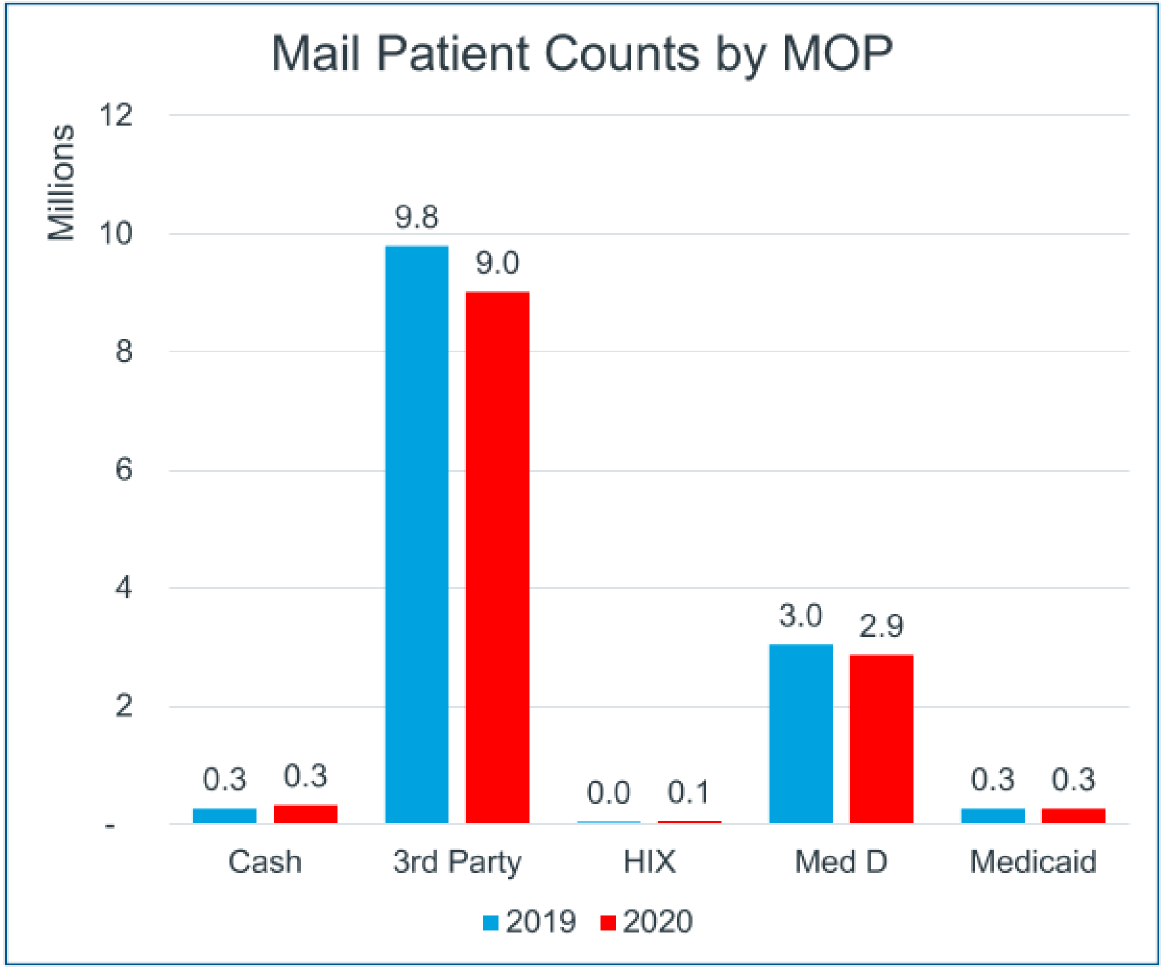


Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

IQVIA

Patients counts were down across each method of payment for both Retail and Mail, the only exception was Med D at Retail

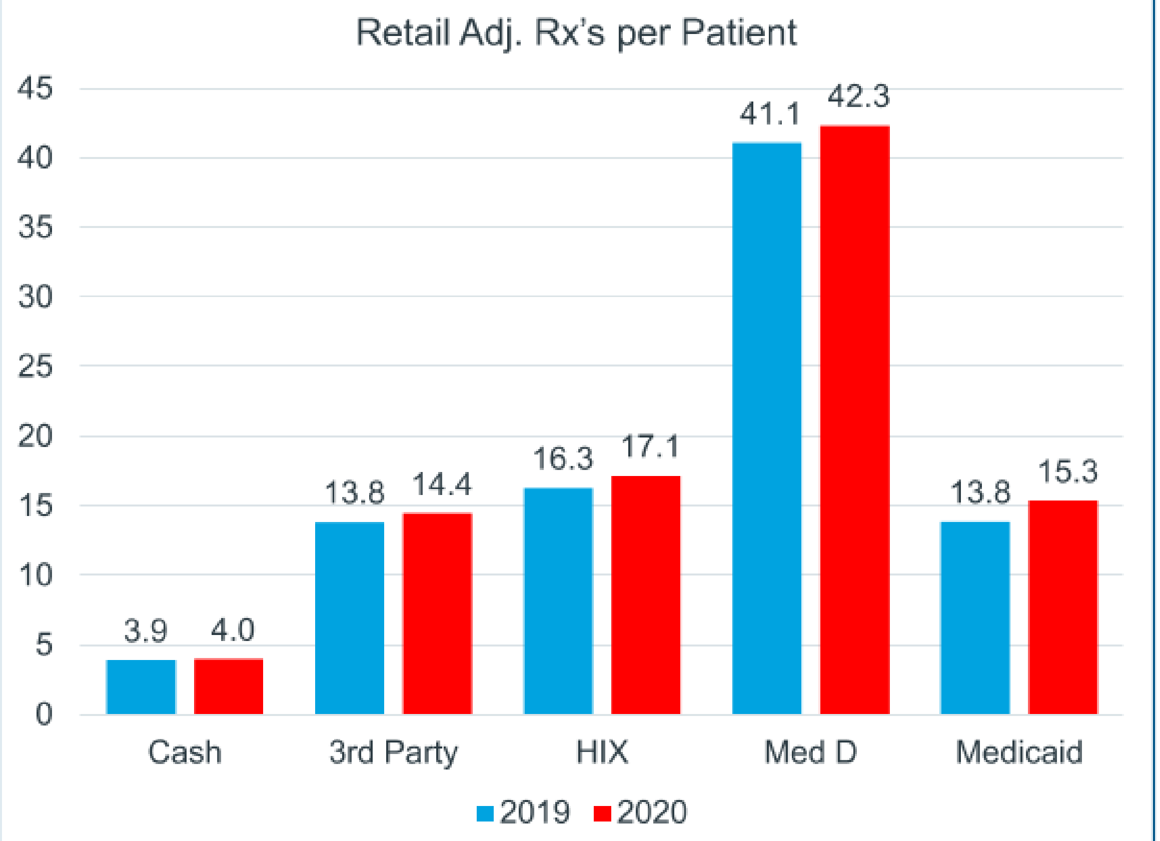


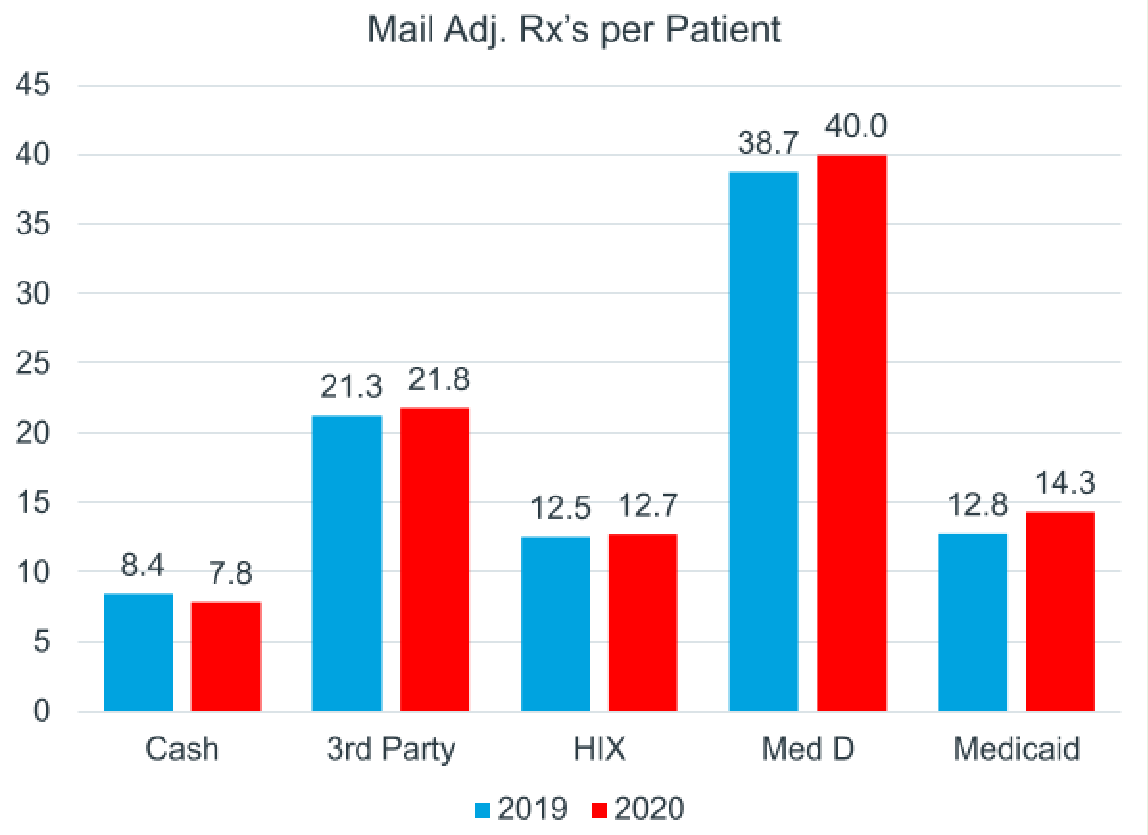


Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

IQVIA

While Patient and Rx counts were down in 2020, we still saw increases in Rx's per Patient over 2019





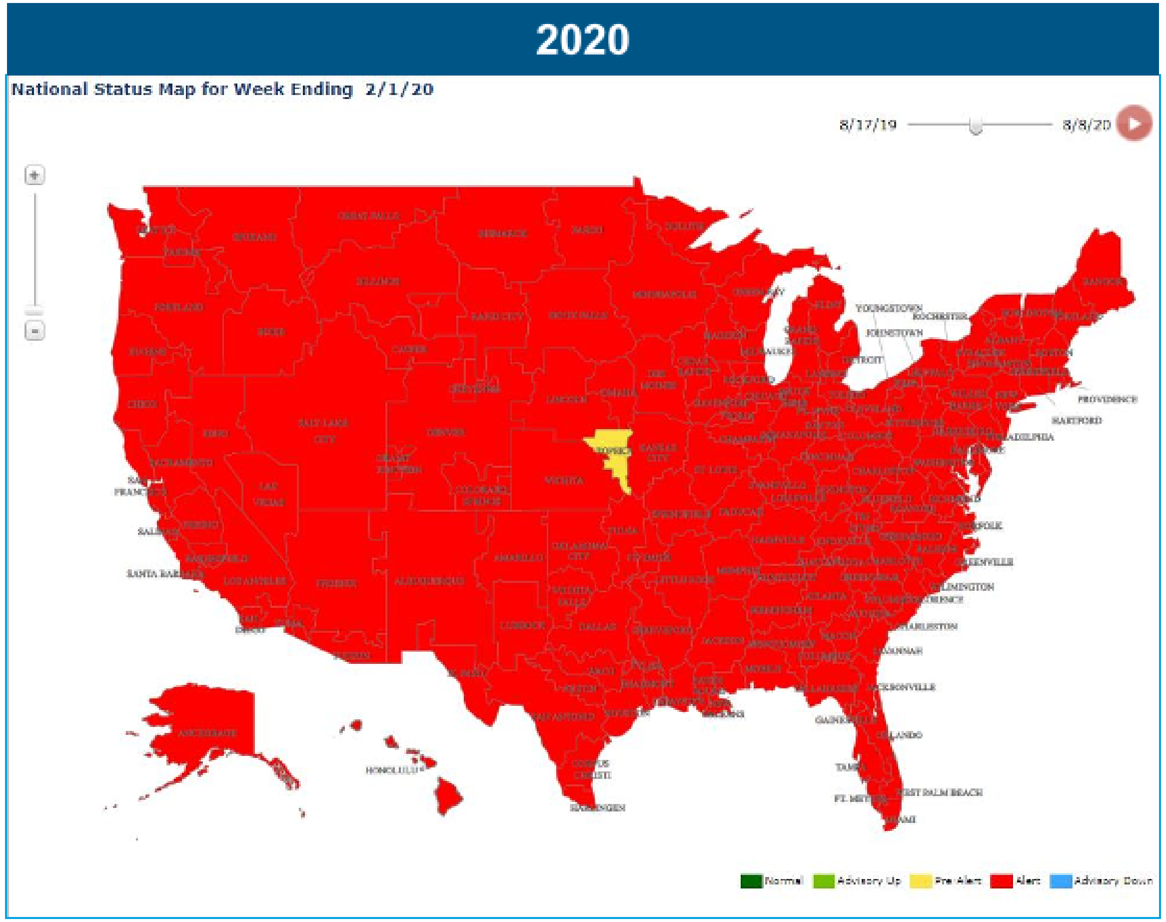
- Retail saw Rx's per Patient increase in 2020 across all methods of payment
- Medicaid experienced the largest increase per patient

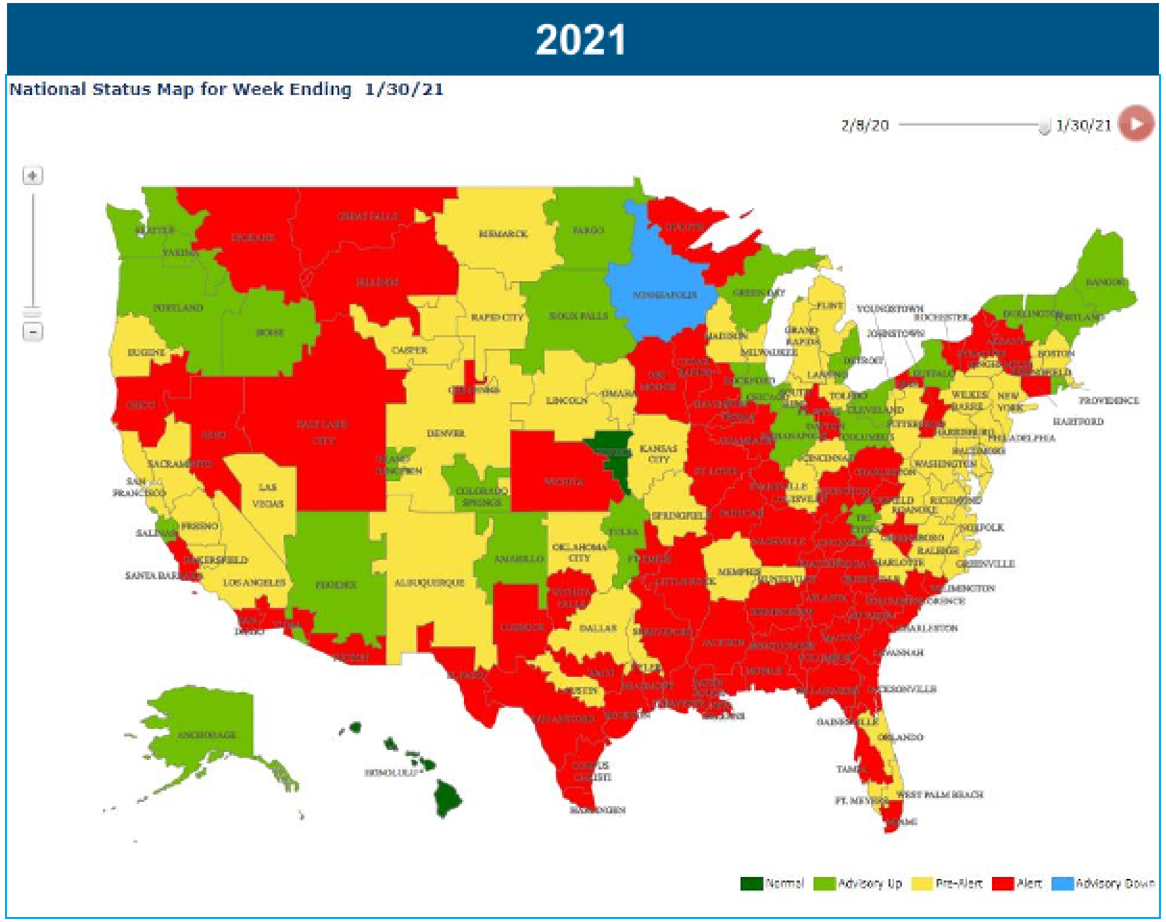
- Mail saw Rx's per Patient increase also with one exception, Cash
- 3rd Party patients using Mail take 7 more Rx's per Patient than Retail

Source: IQVIA Patient Longitudinal Database. Retail Rx's Only. National, All Methods of Payment.

IQVIA

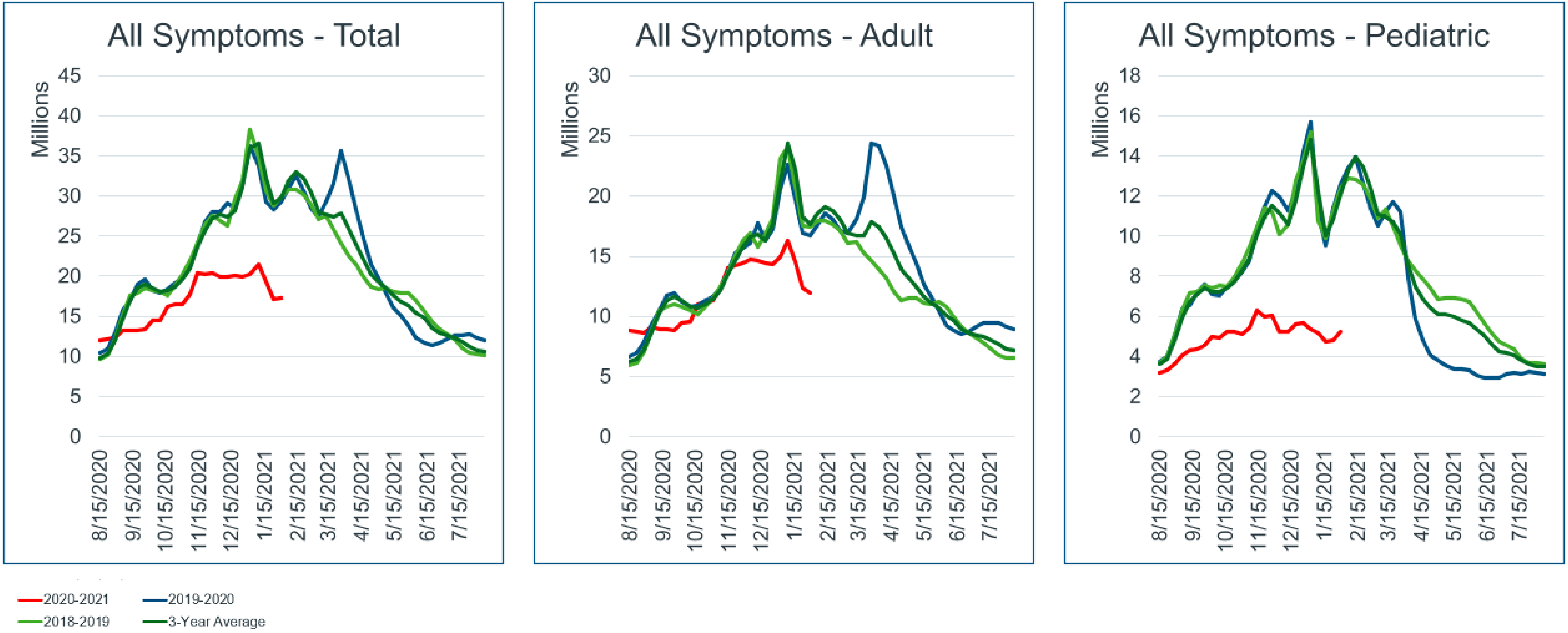
The FAN® heat maps show a very different map than 1 year ago when the whole country was on alert with FAN® symptoms





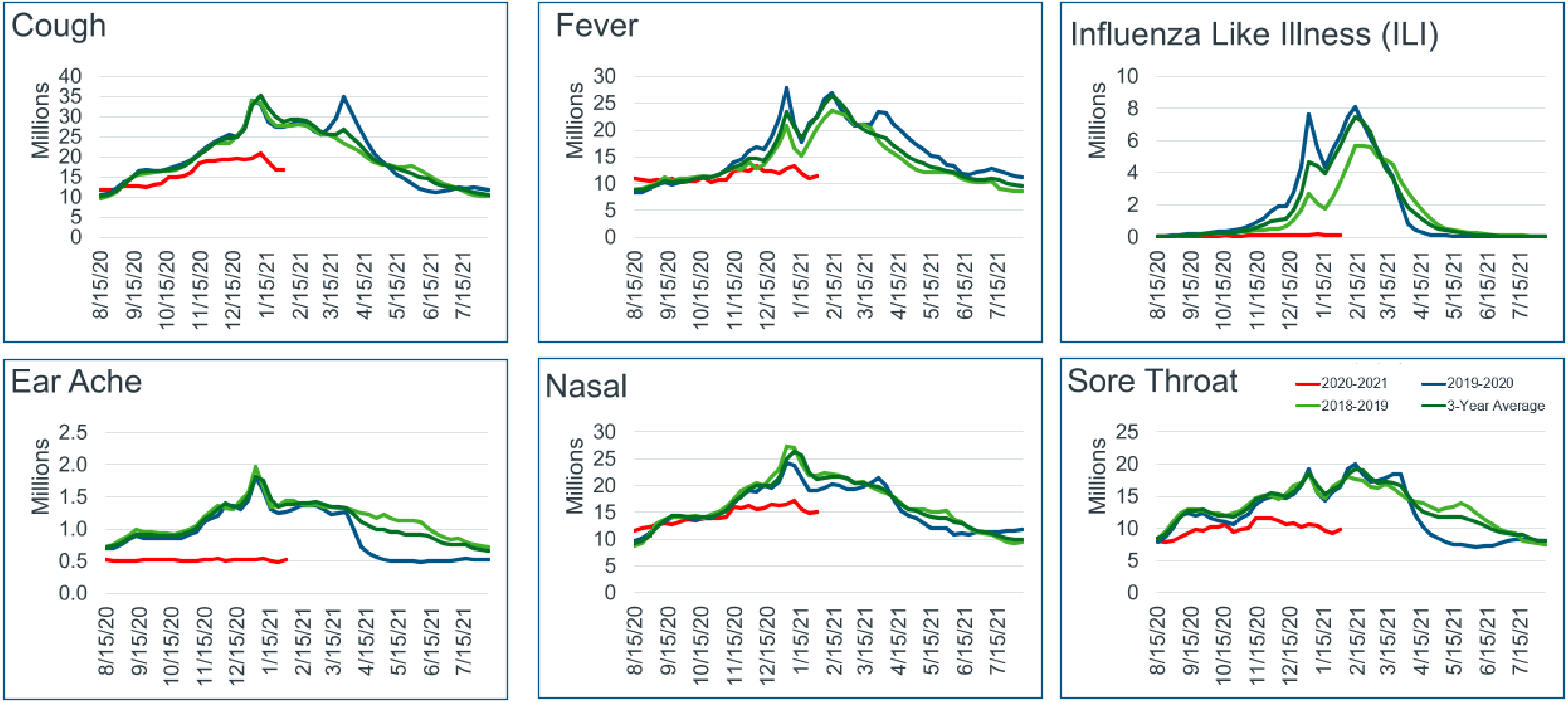
Data Source: IQVIA FAN®

IQVIA's FAN® reports are showing that the 2020-2021 Adult and Pediatric seasonal trends are much lower than historical norms



Data Source: IQVIA FAN®

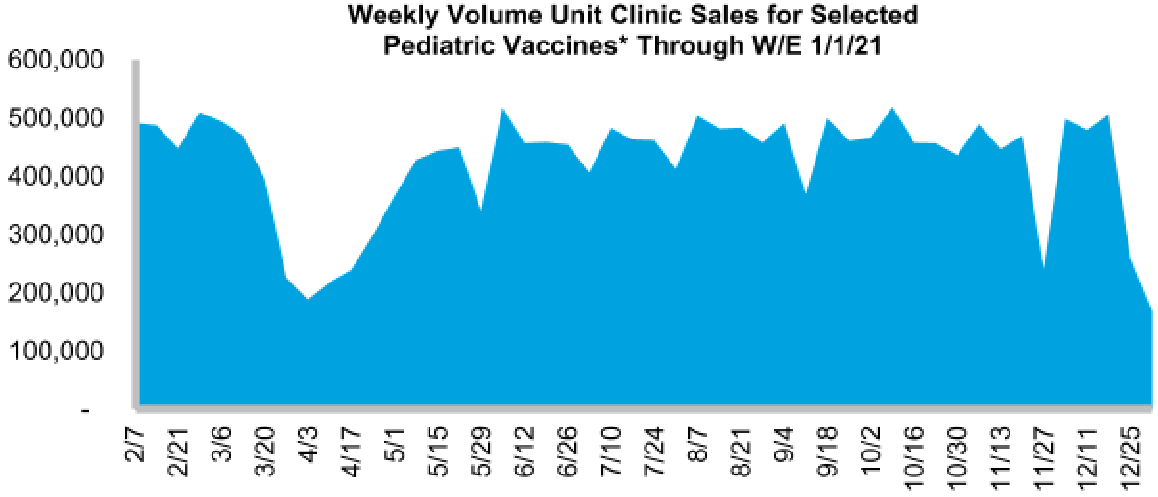
In looking at the 6 symptoms that FAN® tracks, ILI is virtually non-existent

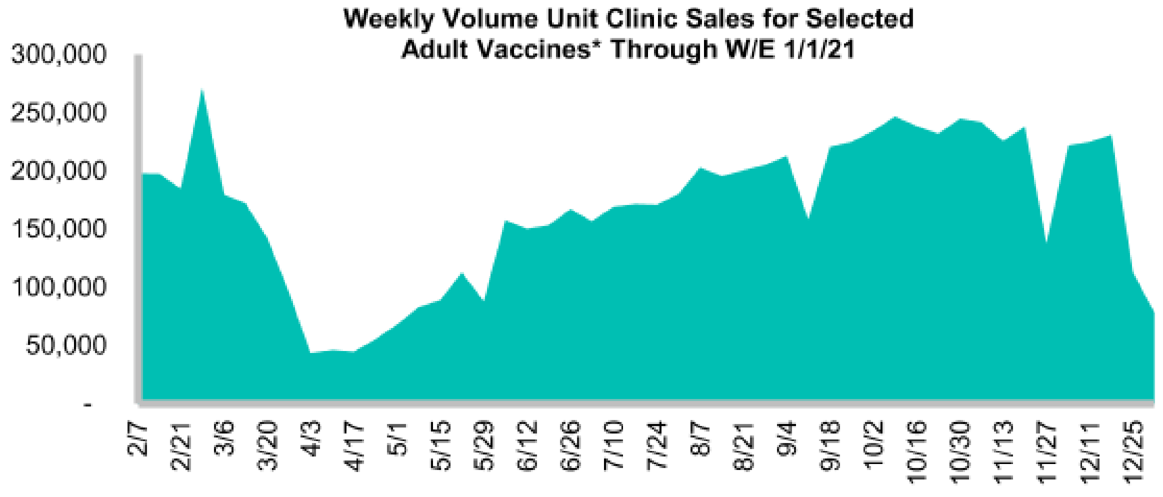


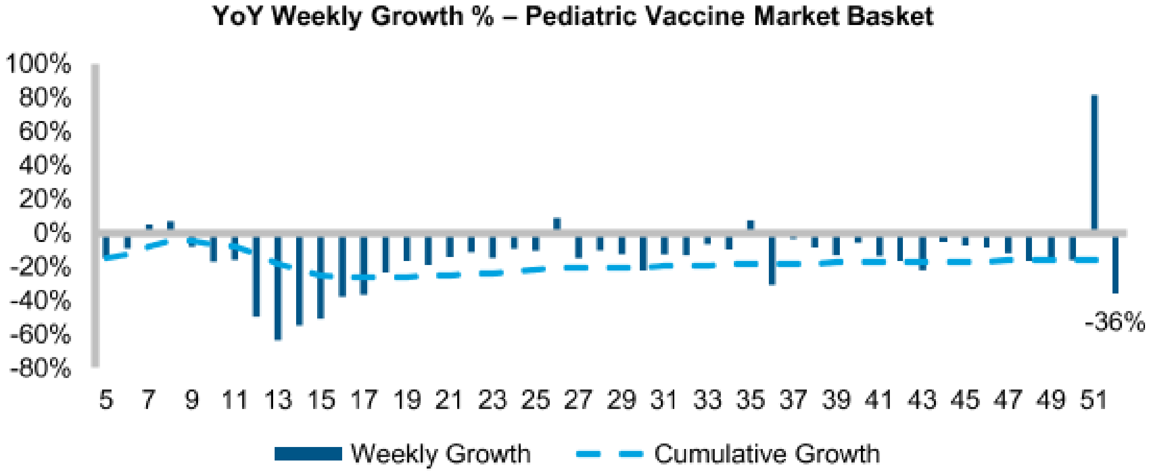
Data Source: IQVIA FAN®

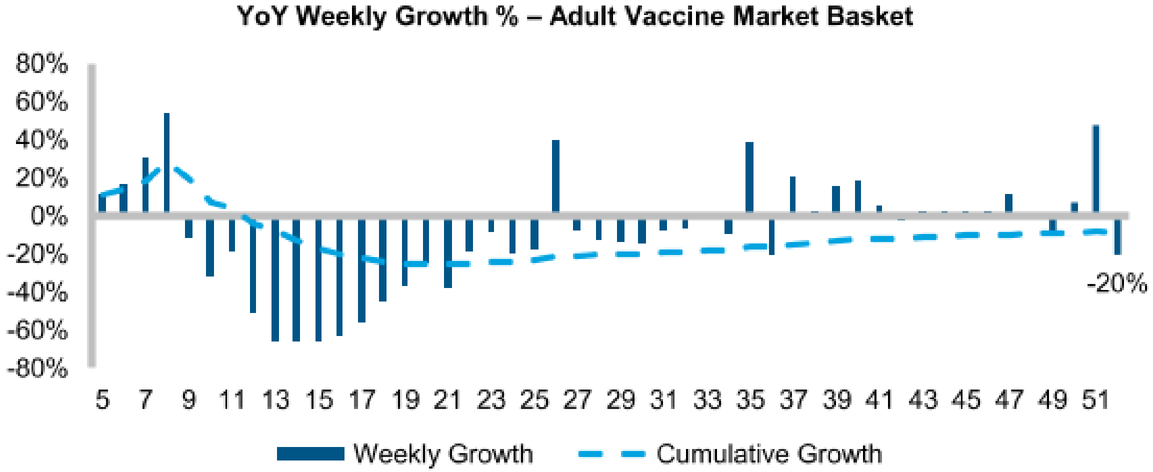
IQVIA

Weekly Vaccine Utilization: Selected Pediatric vs. Adult Weekly Sales



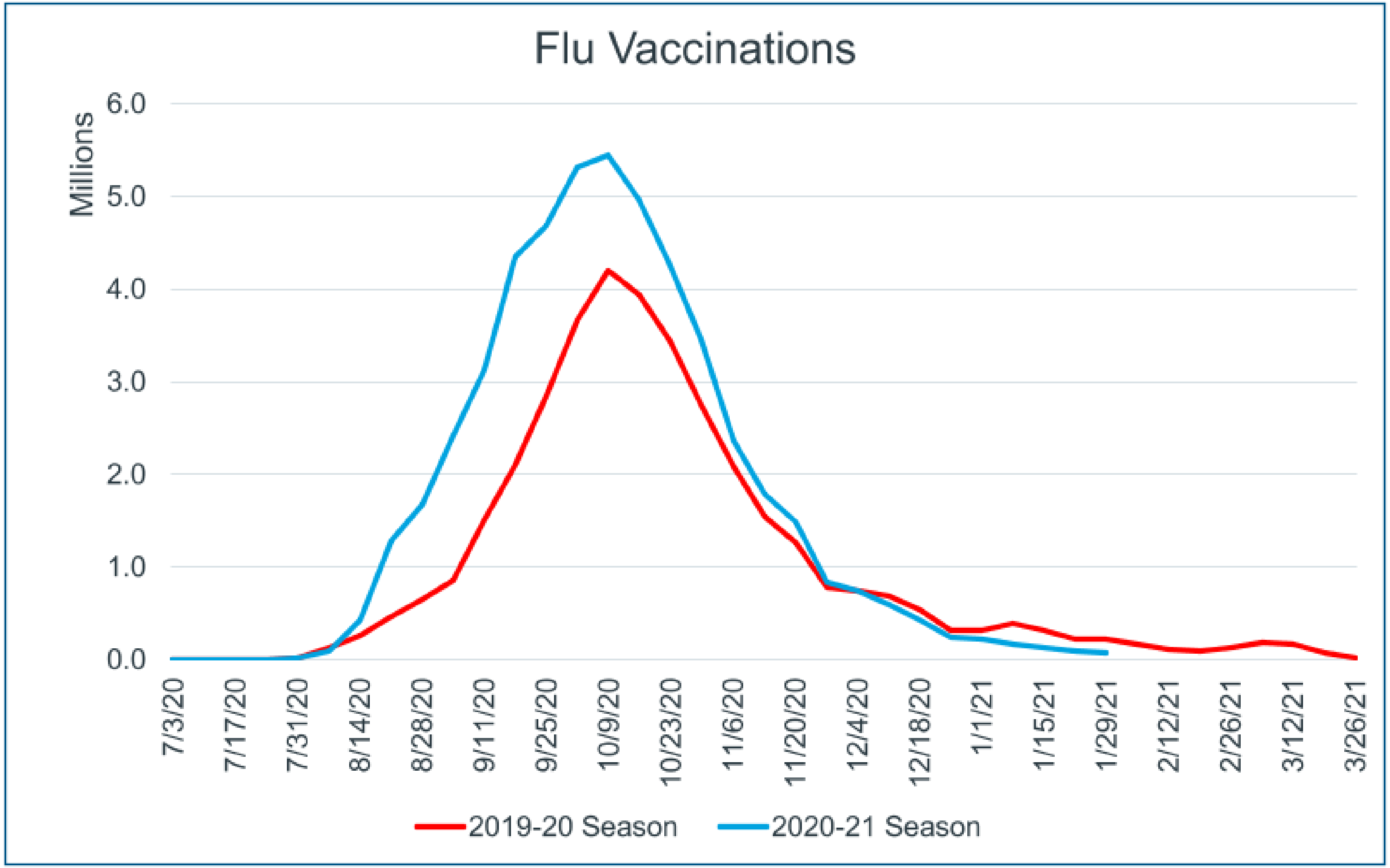


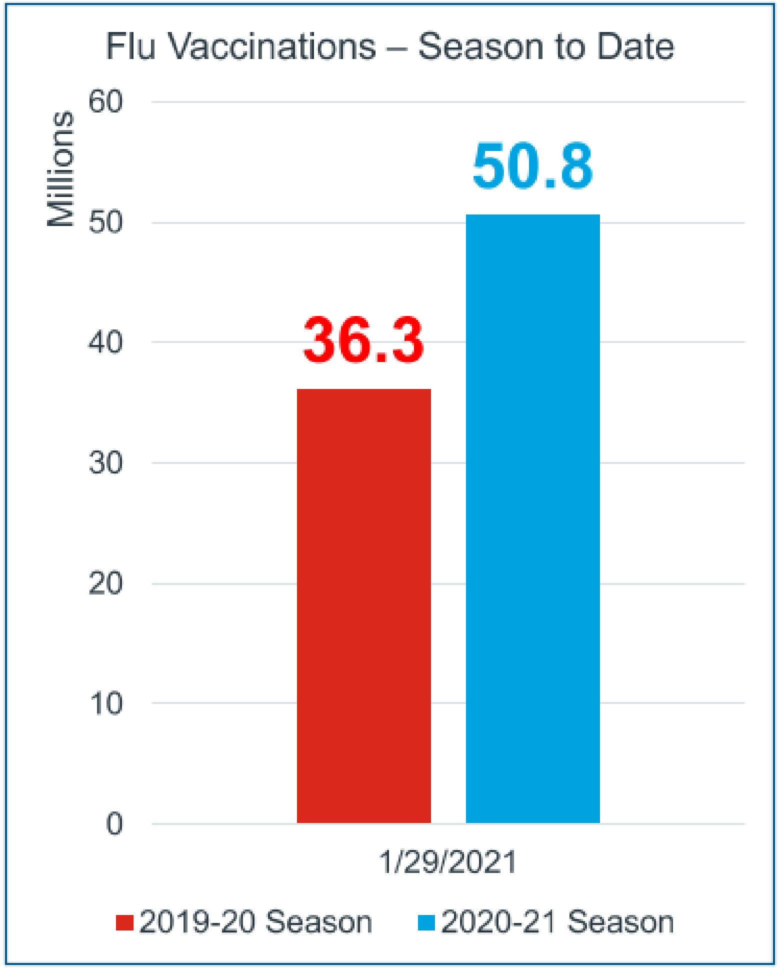




Source: IQVIA Weekly Sales Perspectives (WSP), February – November 2020; Note: **Data reflects sales to clinic channel as defined by IQVIA – No methodology has been applied to determine VACCINE USE BY AGE**

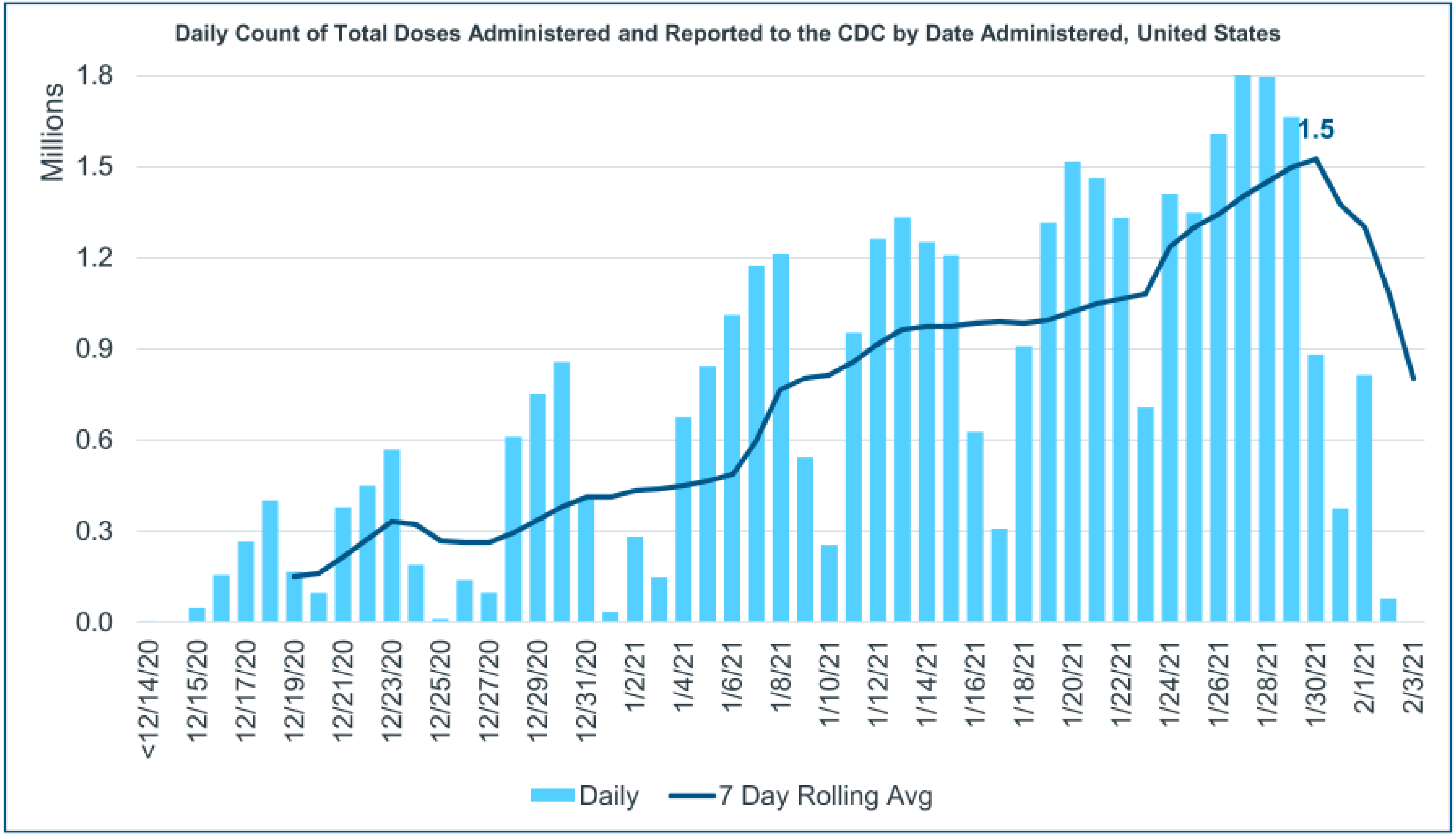
While seasonal volumes have trended down, Flu vaccinations administered at Retail pharmacies are still up 40% season to date





Data Source: IQVIA Xponent©

As of February 3rd, almost 56M doses were distributed while almost 34M were administered



All data reported to the CDC as of Feb 3, 2021

55.9M Total Doses Distributed

33.9M Total Doses Administered

27.2M # of People Receiving 1 or more Doses

18.2M Pfizer

15.6M Moderna

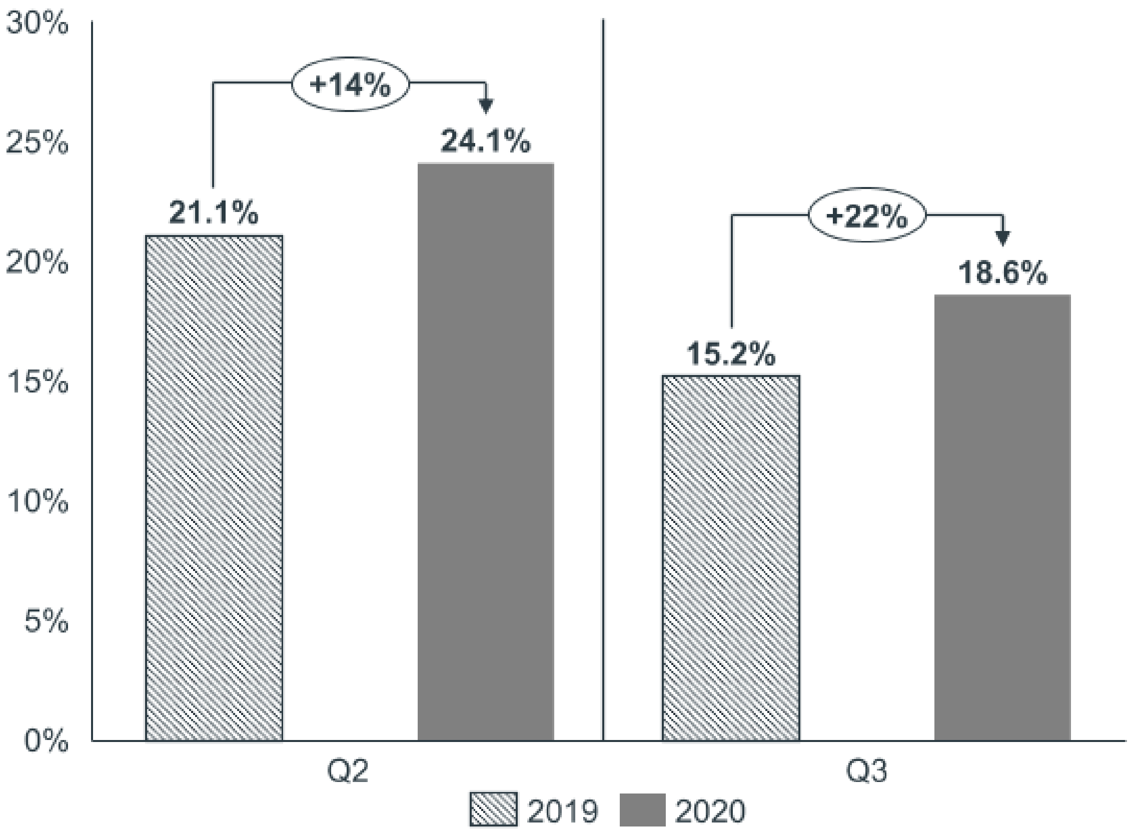
Data Source: https://covid.cdc.gov/covid-data-tracker/#vaccination-trends

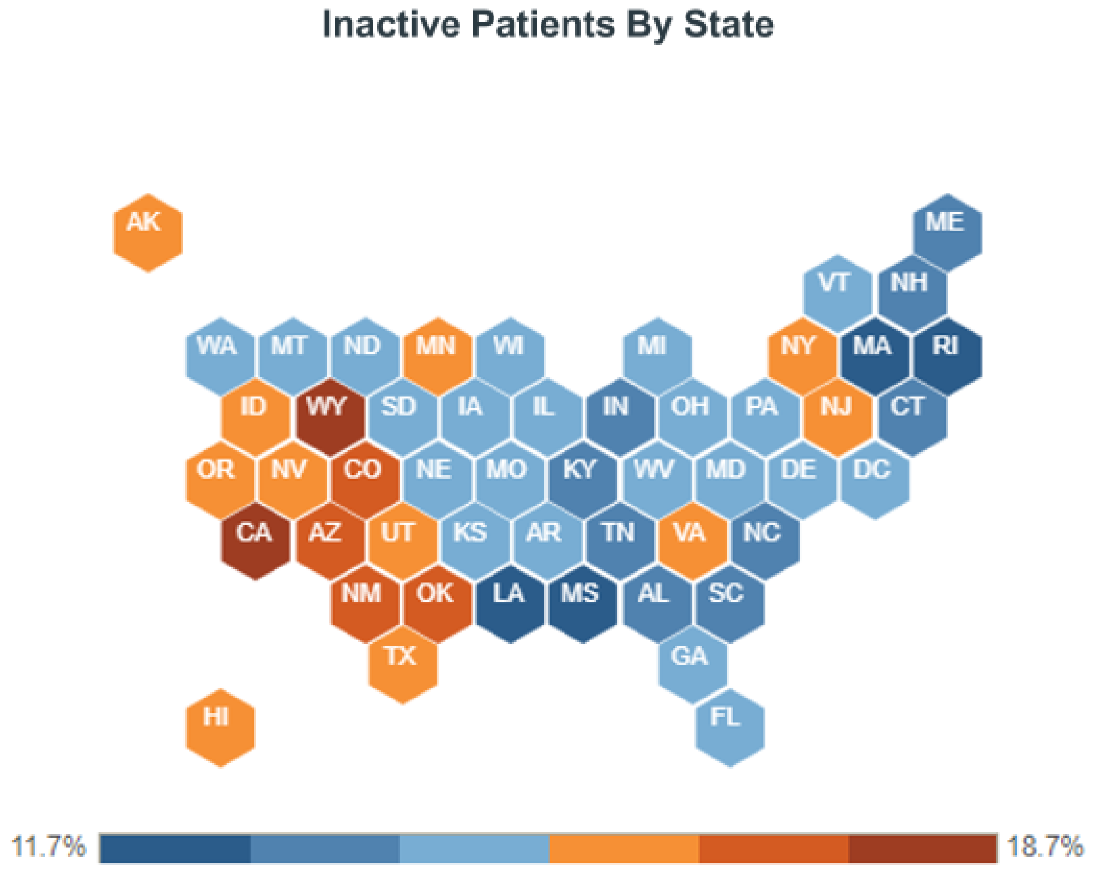
IQVIA

Outlook for 2021

Since the onset of COVID-19 there has been an increase in the number of inactive patients in the market

Many patients who were active in 1Q20 have shown no prescription activity

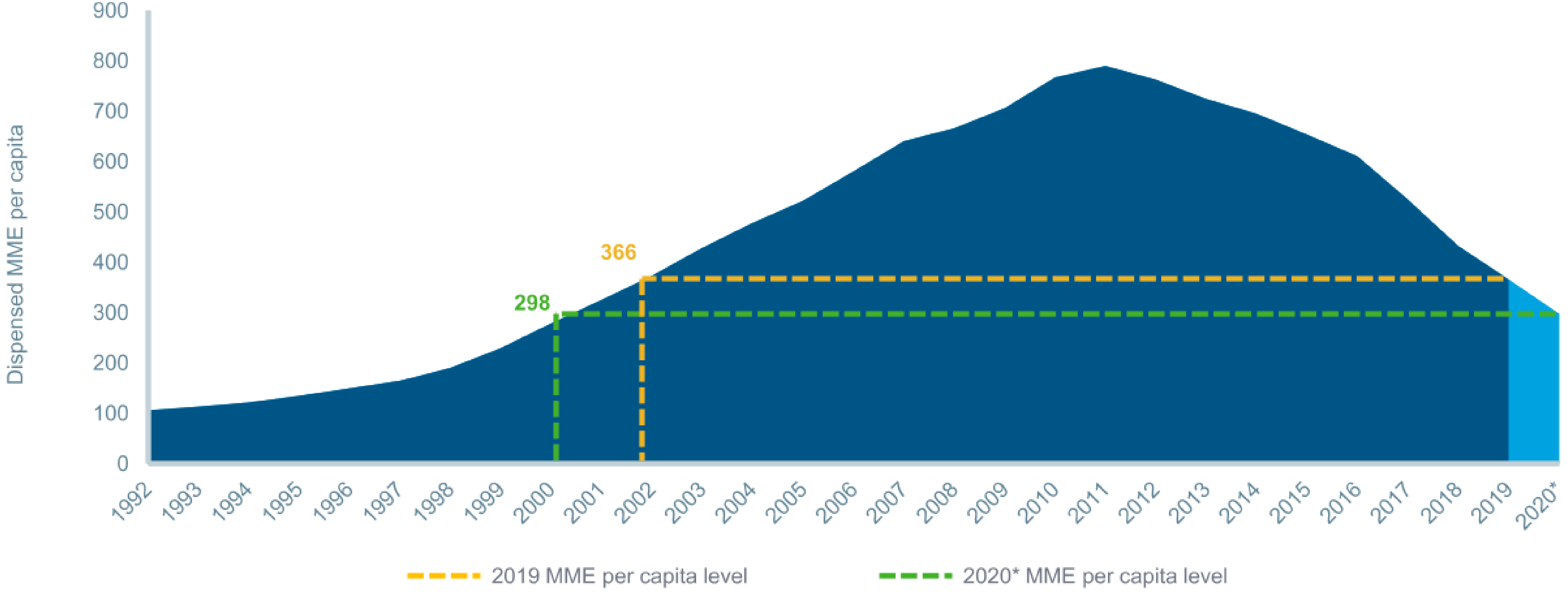




Note: Patient original MOP is defined in a pre-COVID timeframe of 1/1-3/14/2020 where the most recent claim is captured between 3/15-10/2/2020
Source: COVID-19 Patient Coverage Tracker, US Market Access Strategy Consulting analysis

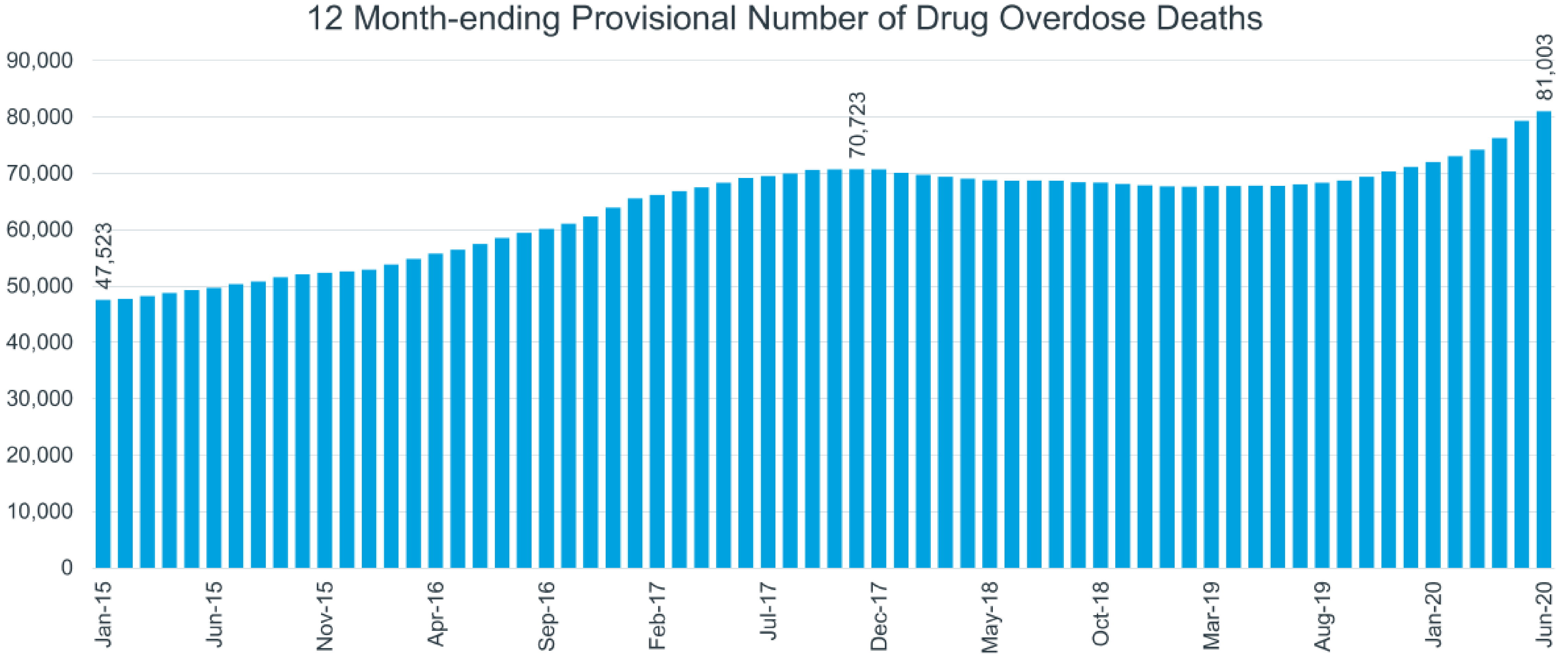
Continued declines have brought normalized per capita prescription opioid use below the 2001 level

Prescription Opioid Use in Morphine Milligram Equivalents (MME) per Capita, 1992–2020



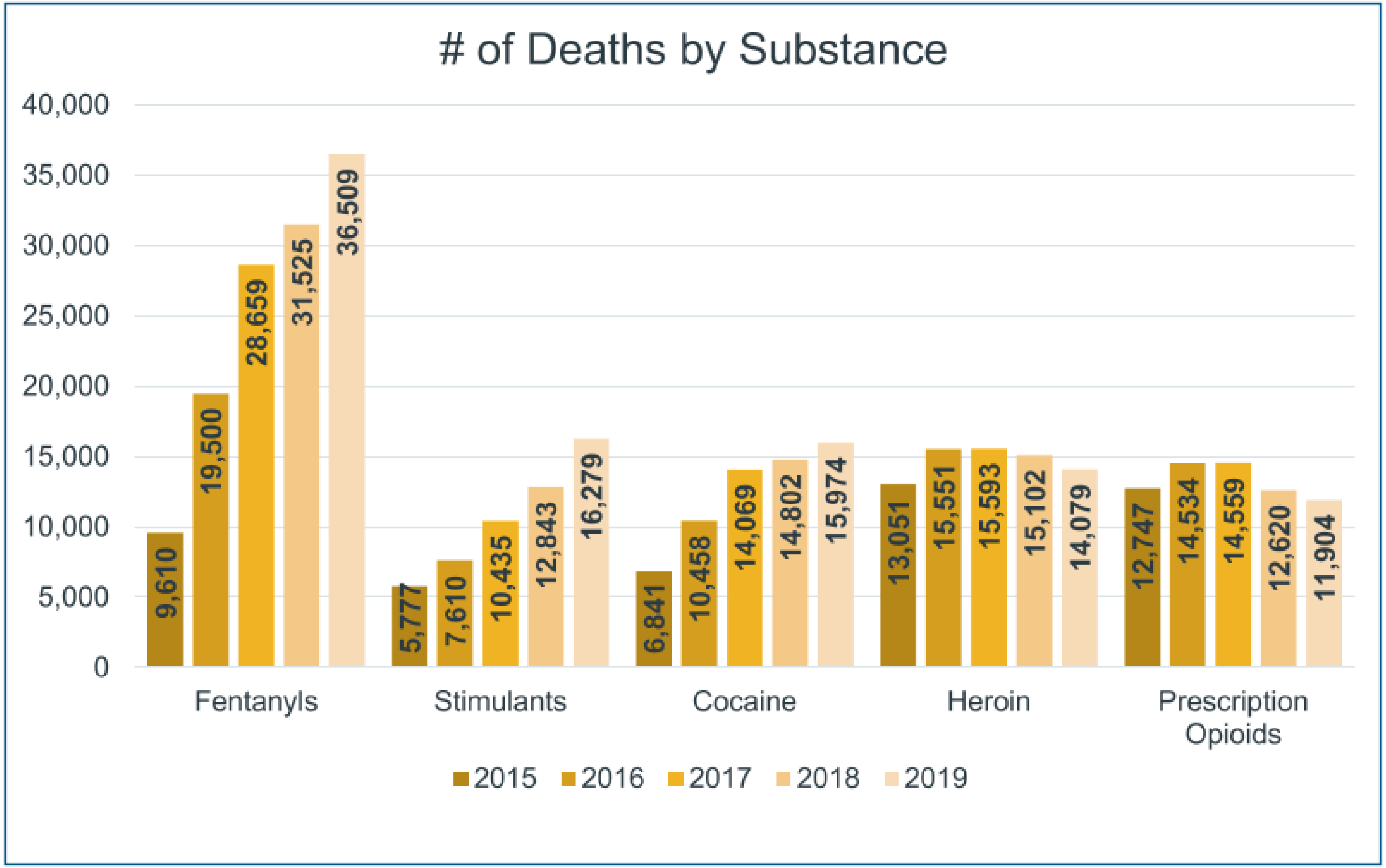
Source: IQVIA Xponent, Mar 2020; IQVIA National Prescription Audit; IQVIA Institute, Nov 2020

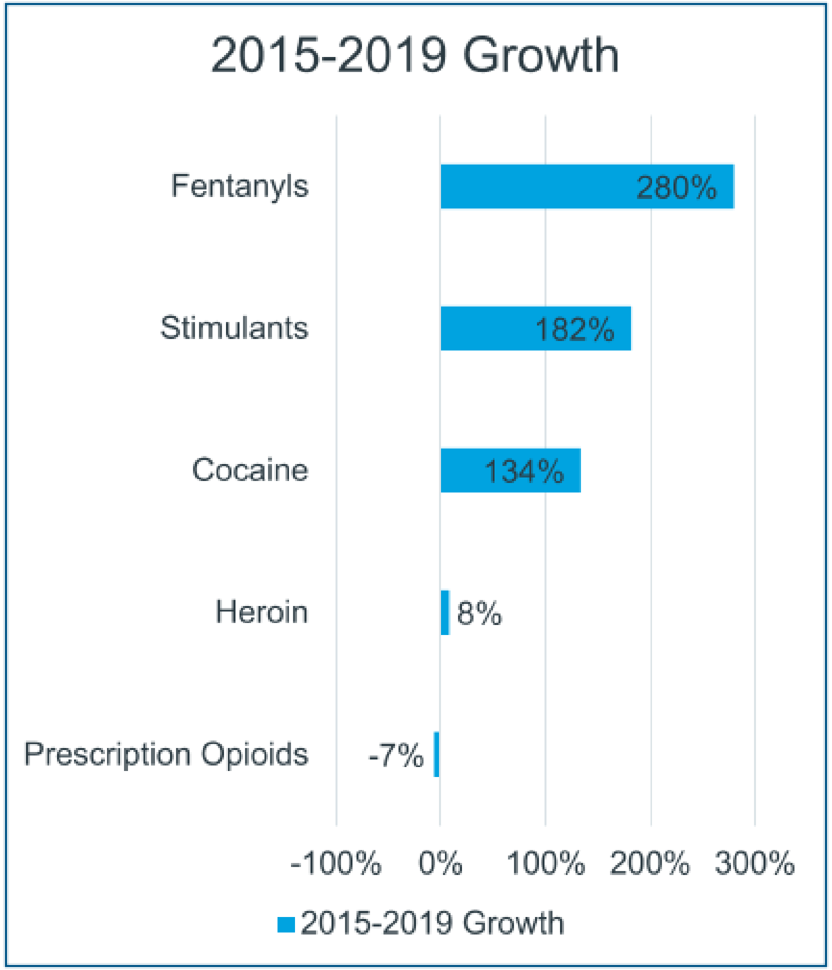
Over 81,000 drug overdose deaths occurred in the US in the 12 months ending June 2020



https://www.cdc.gov/media/releases/2020/p1218-overdose-deaths-covid-19.html

"AMA report shows evolving, deadlier overdose epidemic"*





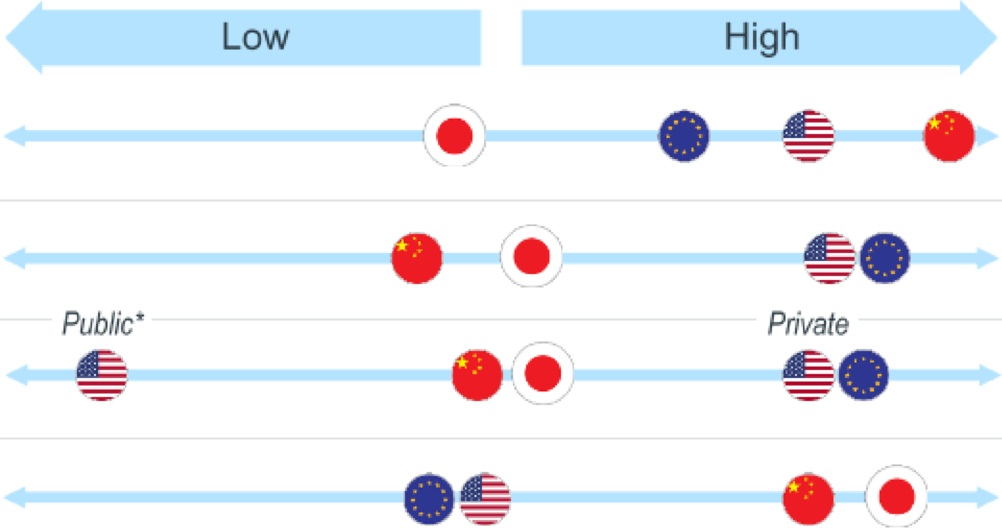
Data Source: CDC Provisional Drug Overdose Death Counts, https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm
* https://www.ama-assn.org/press-center/press-releases/ama-report-shows-evolving-deadlier-overdose-epidemic

Trends to Watch in 2021

1. Unemployment, healthcare economic impact of COVID-19, and pace of recovery
2. Vaccine rollout, distribution, reimbursement, and administration
3. Healthcare reform under the Biden administration
   - What is in? What is likely? What is out?
   - Which Trump Admin Midnight Reforms stay?
4. Expanding payer control in pharmacy *and medical* reimbursed products
5. Growing net price pressure in immunology and other specialty markets
6. Accumulator Adjuster Programs impacting government price calculations reshape copay and hub industry
7. Explosive growth and increased controversy in 340B utilization
8. Permanent shifts in patient site of care and reimbursement rates
9. New Era for Value Based Pricing agreements following new CMS regulations
10. Awareness of the impact of disproportionate access and affordability for minority populations

The pandemic has impacted stakeholders to varying extents depending on region

Magnitude of Pandemic disruption (illustrative)



	Factors
Patients	*Personal health engagement; Technology adoption*
Physicians	*Restricted rep access; Increased tele-health adoption*
Payers	*Reallocation of budgets- impact on and within medicines budget*
Hospitals	*Shifted role of hospitals; Opening of new treatment centers*

Digital Impact

Patients

- Patient uses online channels to communicate with physician, insurer, pharmacist

Physicians

- Pushing and pulling EMR data across systems to support real-time decision-making

Payers

- Online contracting and rebating
- De-identified data linking Rx with other data via cloud

Hospitals

- Advanced analytics to identify patients, improve scheduling, and inform treatment sequencing

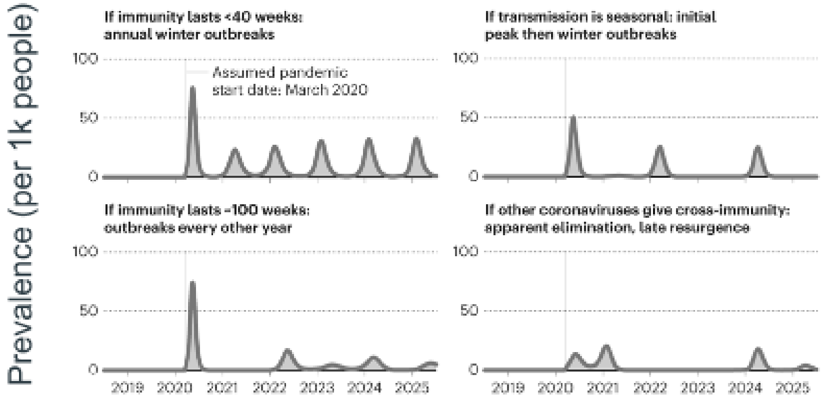
*Trump drug pricing proposals not considered as not directly inspired by pandemic crisis

Source: IQVIA European Thought Leadership

Vaccine roll-out limitations and immune longevity may draw recovery out for years

Breaking the chain of transmission will be challenging, even for developed countries

Immunity length will define recurrence of COVID-19



Rollout will meet unforeseen roadblocks

COVID-19 immunity 'could last three months after infection or vaccination'

Rich countries grab half of projected covid-19 vaccine supply

Pfizer will only distribute half of promised Covid vaccines, reports say

Covid vaccine supply chain targeted by hackers, say security experts

Not enough Covid vaccine for all until 2024, says biggest producer

Pfizer tells U.S. officials it cannot supply substantial additional vaccine until late June or July

Vaccine acceptance is the next hurdle

We will live with a Vaccine+ scenario for some time to come

- Global vaccination programmes in full force
- Masks will continue to be worn
- Social distancing to remain in place
- Hygiene protocols will continue
- Test and trace systems prevalent
- Global travel scrutinised and restricted

Source: IQVIA European Thought Leadership; https://www.nature.com/articles/d41586-020-02278-5; https://doi.org/10.1016/j.amepre.2020.06.011'; https://www.bbc.co.uk/news/resources/idt-b6360f40-84f9-469b-b6a3-a4568e161c4f

What do the 2020s have in store in the aftermath of COVID?

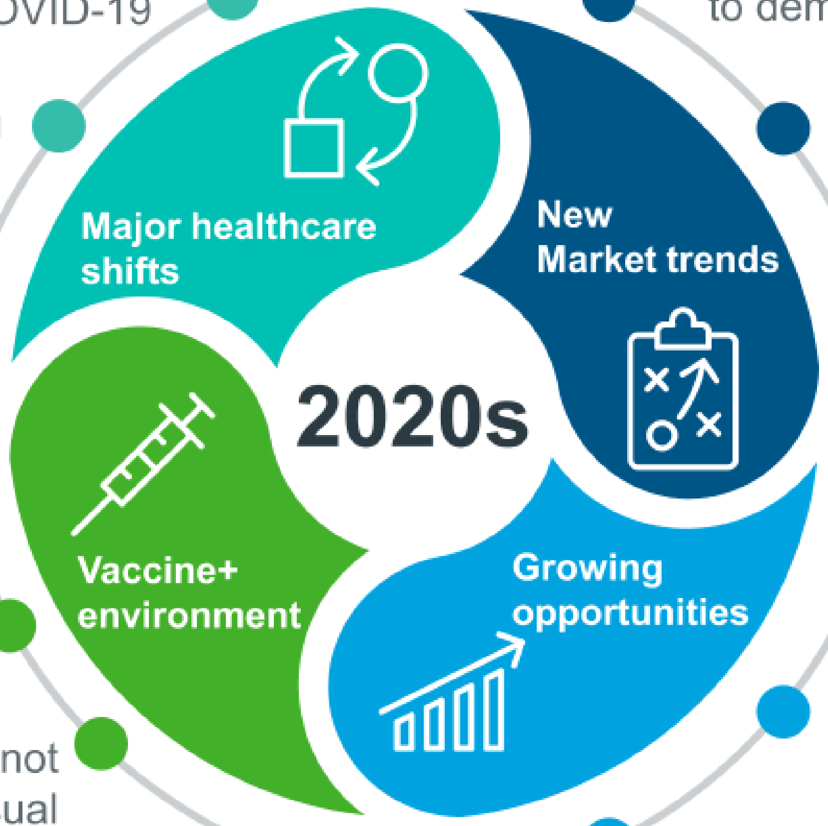
All geographies and stakeholders impacted by COVID-19

Non-COVID patient backlog

New-normal launches must adapt

Widespread and successful vaccination now seems likely

Successful vaccination will not mean a return to business as usual



Prices scrutinized; increasing pressure to demonstrate value

Disruption to HCP engagement; lasting behaviour changes

Increasingly digital and self-administered healthcare

Wider access to novel cancer drugs

China's rise in the pharma market

Biosimilars grow into maturity

Source: IQVIA European Thought Leadership

What themes should stakeholders recognize today?

Pharmacies

- Reimbursement
- Controlled Substances
- Access to Specialty Drugs
- Purchasing Alliances
- Track and Trace
- Amazon and the cash customers

Generic Manufacturers

- Purchasing Alliances
- Portfolio Optimization (“Shrink to Grow”) / Market Saturation
- Brand /niche drugs (complex generics)
- Generic Price Deflation
- Which approvals to launch?

Wholesalers

- Contract Negotiations
- Controlled Substances
- Generic Price Deflation / Slow Brand Inflation
- Track and Trace
- Purchasing Alliances

Brand/Specialty Manufacturers

- Price increase backlash
- Becoming more specialized / Oral Specialty
- Declining Hep C and Pain Dollars
- Orphan Drugs
- Copay accumulators

Payers

- Managing Specialty Drug Costs
- Rising Oncology costs
- Formularies blocks and exclusive launches

Consumers

- Rising costs: high out-of-pocket costs / coinsurance / accumulators
- Quality of Insurance Coverage
- Specialty Tiers

Patients visit pharmacies 10x more frequently than they see other healthcare providers[1]

Pharmacists' roles are expanding

- Chronic Disease Management
- Conduct Therapeutic Interchange
- Minor Ailment Care
- Immunizations
- Preventive Health Screenings
- Health & Wellness Care
- Specialty Medicare Care & Counselling
- Pharmacogenomics Counselling
- Transitions of Care
- Medication Optimization

1 Hemberg N, Huggins D, et al. Innovative Community Pharmacy Practice Models in North Carolina. North Carolina Medical Journal. June 2017. http://www.ncmedicaljournal.com/content/78/3/198.full

Thank you

Disclaimer:

- The analyses, their interpretation, and related information contained herein are made and provided subject to the assumptions, methodologies, caveats, and variables described in this report and are based on third party sources and data reasonably believed to be reliable. No warranty is made as to the completeness or accuracy of such third party sources or data.
- As with any attempt to estimate future events, the forecasts, projections, conclusions, and other information included herein are subject to certain risks and uncertainties, and are not to be considered guarantees of any particular outcome.

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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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In his role at IQVIA Scott has worked with retailers, software vendors and other data suppliers where he has helped them to understand their performance in the market place through business reviews and market analysis.

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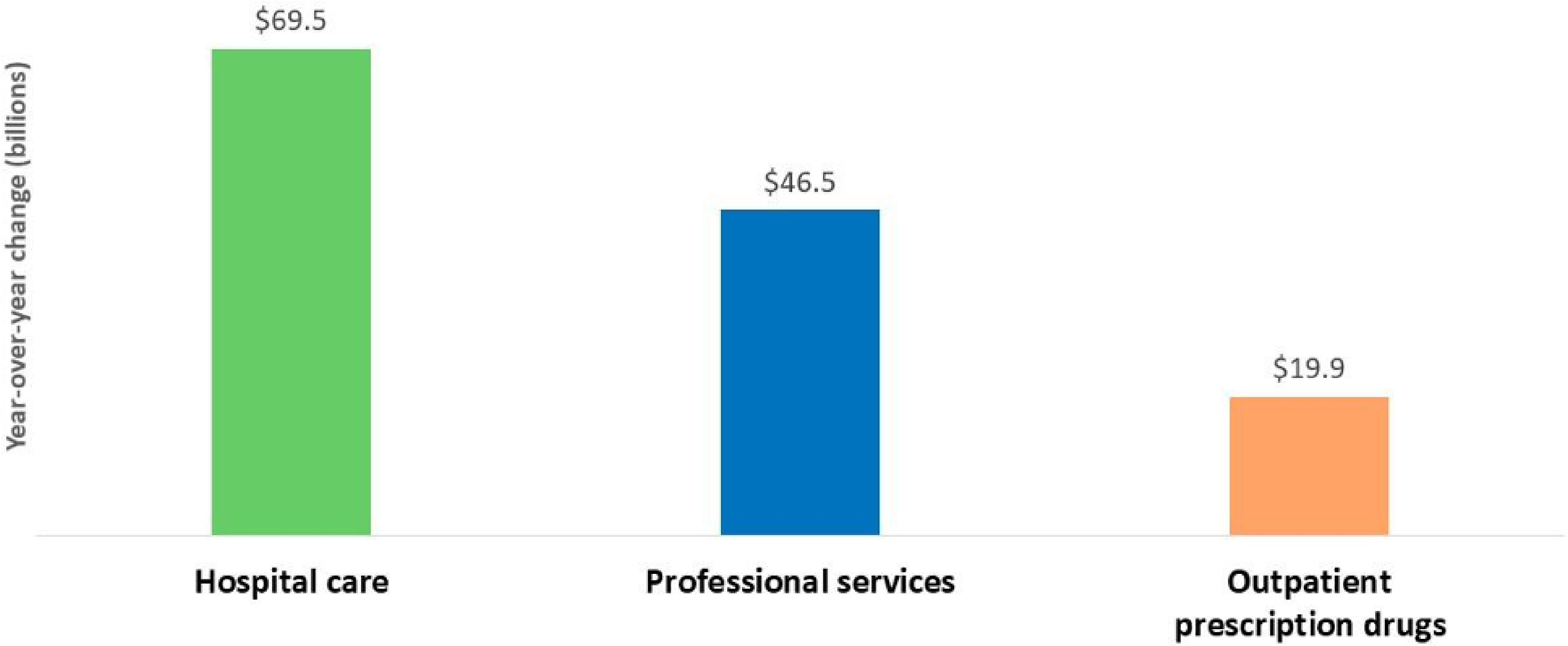
Payer/Policy Environment

Change in U.S. National Health Expenditures, by Major Spending Category, 2018 vs. 2019



Source: Drug Channels Institute analysis of National Health Expenditure Accounts, Office of the Actuary in the Centers for Medicare & Medicaid Services, 2020. Professional Care includes: Physician and Clinical Services; Dental Services; and Other Professional Services. Outpatient prescription drug figures exclude inpatient prescription drug spending within hospitals and nearly all provider-administered outpatient drugs. Figures in billions. Figures may differ from previous reports due to the 2019 comprehensive revision to the national health expenditure accounts.

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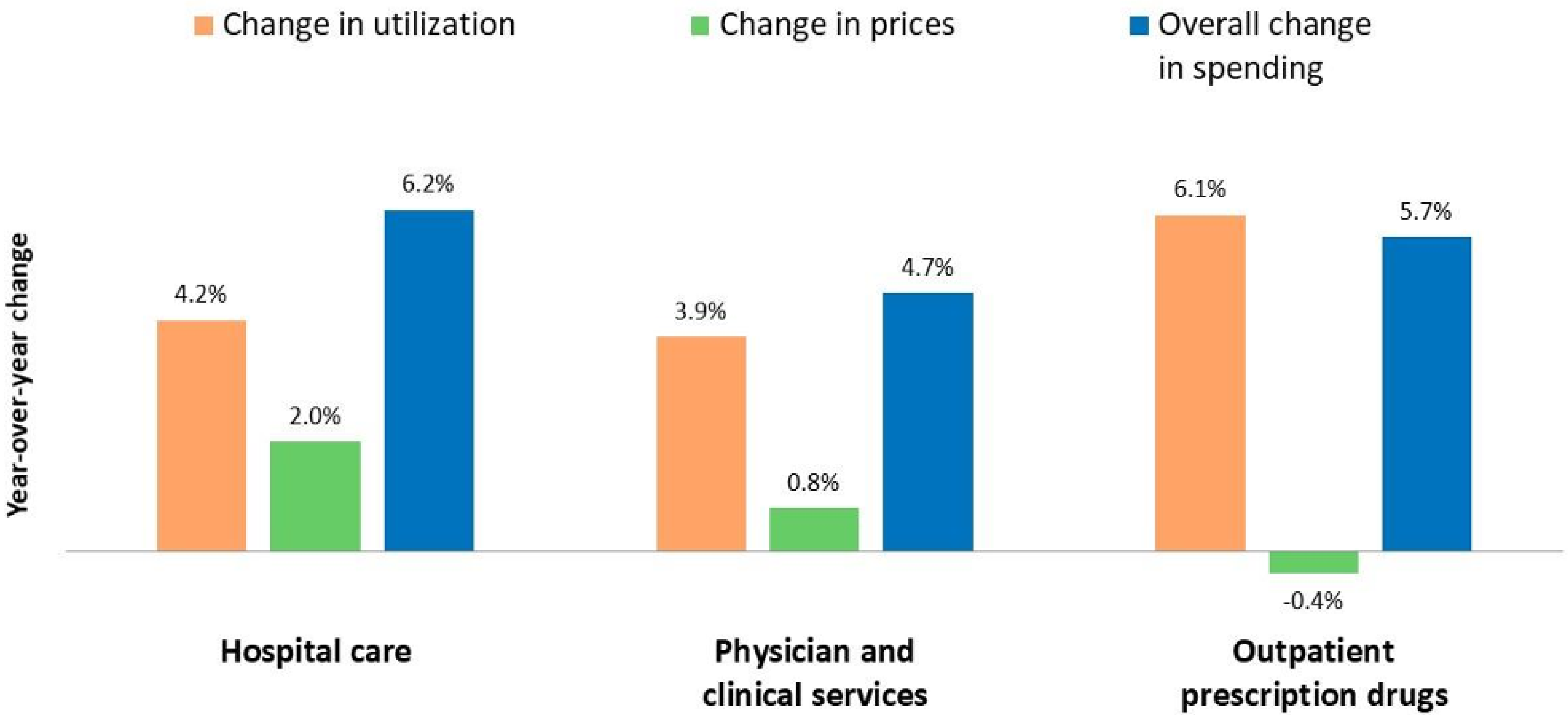
Components of Change in National Health Expenditures, by Major Spending Category, 2019



Source: Drug Channels Institute analysis of National Health Expenditure Accounts, Office of the Actuary in the Centers for Medicare & Medicaid Services, 2020. Outpatient prescription drug figures exclude inpatient prescription drug spending within hospitals and nearly all provider-administered outpatient drugs. Figures in billions. Figures may differ from previous reports due to the 2019 comprehensive revision to the national health expenditure accounts.

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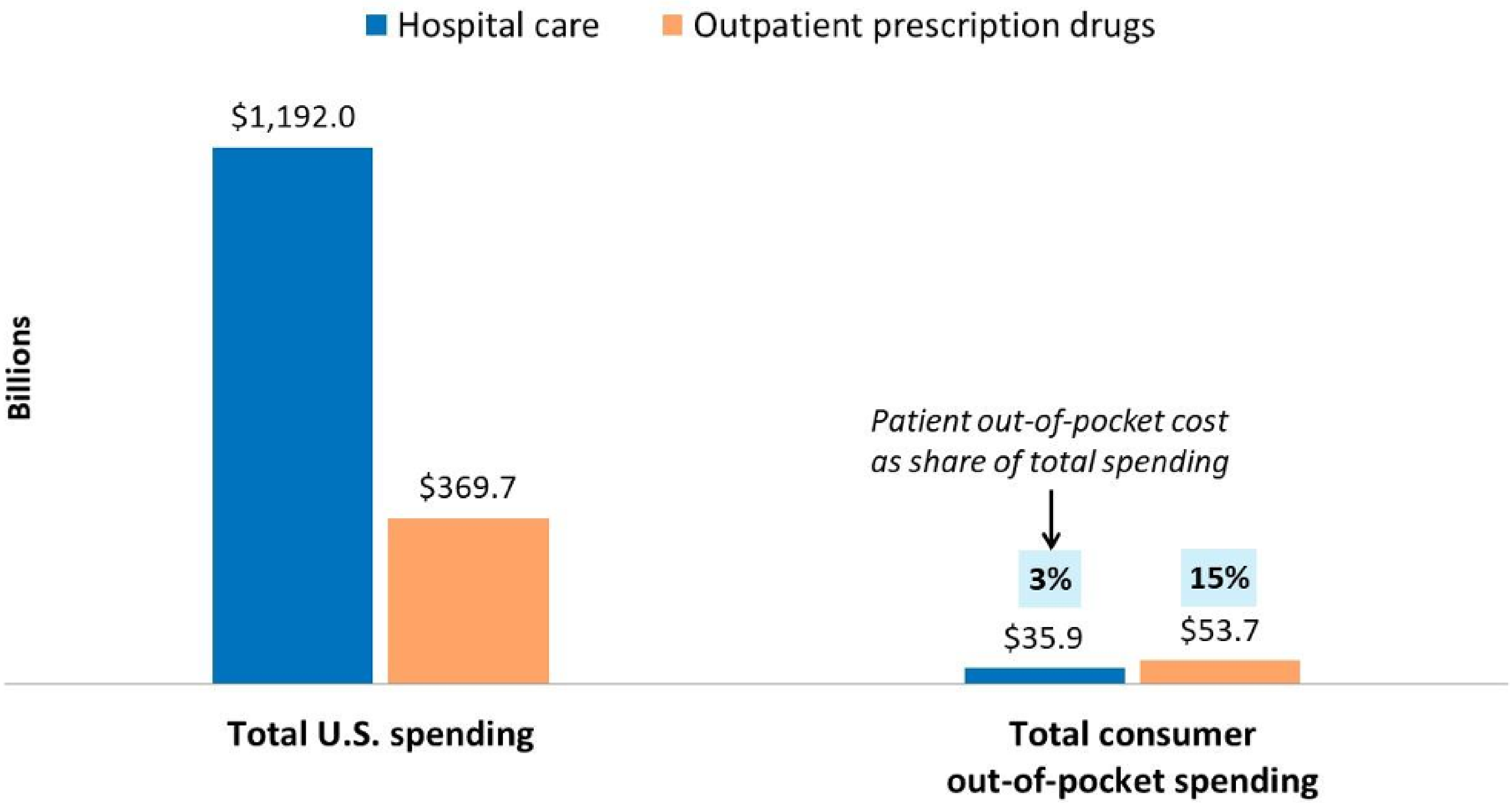
Hospital Care vs. Prescription Drugs, Total Spending and Consumer Out-of-Pocket, 2019



Source: Drug Channels Institute analysis of National Health Expenditure Accounts, Office of the Actuary in the Centers for Medicare & Medicaid Services, 2020. Outpatient prescription drug figures exclude inpatient prescription drug spending within hospitals and nearly all provider-administered outpatient drugs. Figures in billions. Figures may differ from previous reports due to the 2019 comprehensive revision to the national health expenditure accounts.

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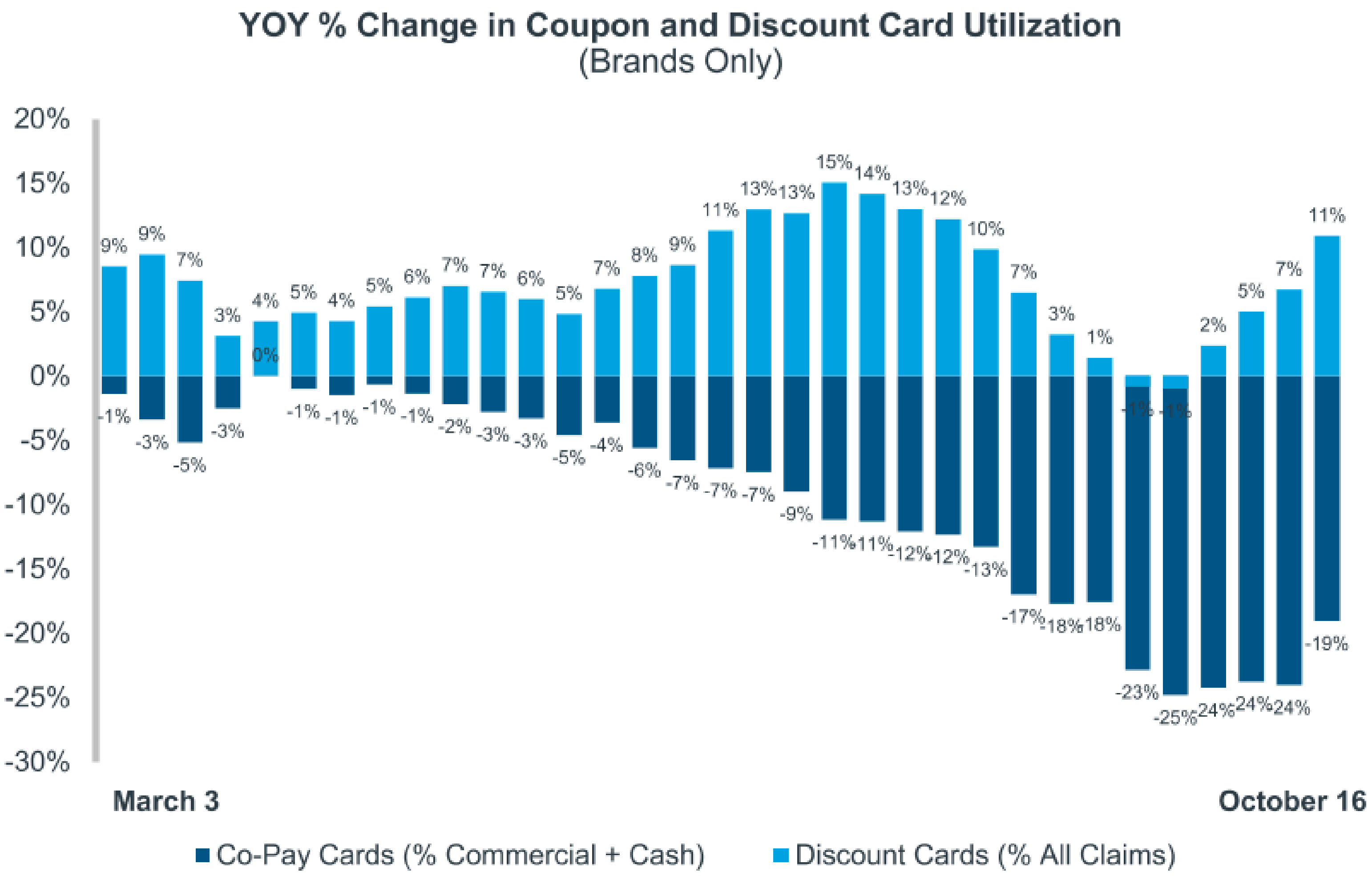
Recently, independent discount card programs have shown an increase in use while manufacturer co-pay card use has declined



- In 2020, patients have chosen to move through cash discount cards and outside of traditional insurance
- Conversely, manufacturer-sponsored co-pay card use is down by more than 20% in October
- GoodRx now accounts for ~1.5% of the total prescription universe

Note: " Co-Pay Card" are manufacturer-sponsored out-of-pocket cost for either commercially or underinsured patients. "Discount Cards" are independent programs (e.g. GoodRx) available as an alternative to patients paying outside of traditional insurance
Source: LAAD Pharmacy Claims Data
COVID-19 Market Impact - w/e Dec 4, 2020