

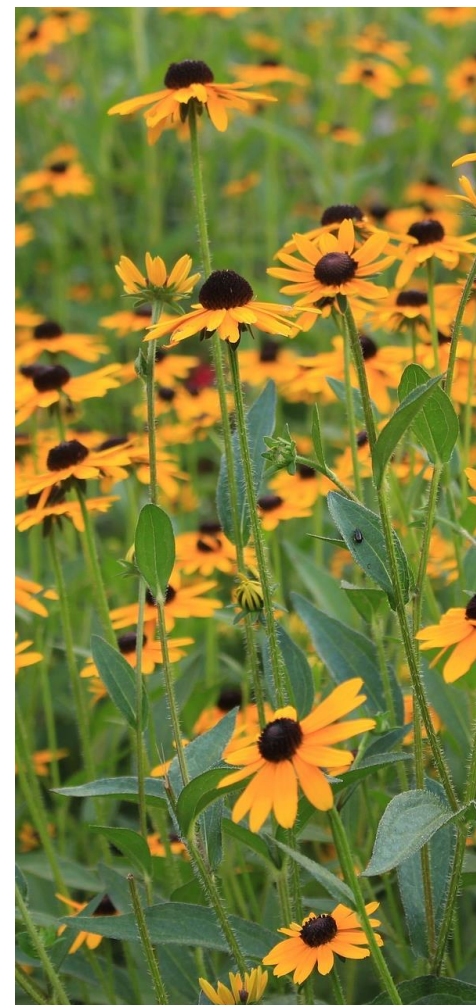


The Hilltop Institute

Medicaid Prescription Drug Analysis

Prescription Drug Affordability Board

September 27, 2021



UNIVERSITY *of* MARYLAND
SCHOOL OF PHARMACY

UMBC

Overview of Work

- Supporting:
 - § 21-2C-07. Study of aspects of pharmaceutical distribution and payment
 - § 21-2C-08. Identifying prescription drug products that create affordability challenges for State health care system and patients
- Currently have access to Medicaid data, but will continue to gain access to additional sources
- Using Medicaid Data to develop specifications and metrics that could be applied to additional data sources

Analytic Approach

- Initial Analysis: CY 2019 and CY 2020
- Goal to identify highest Medicaid spending across key domains:
 - National Drug Code (NDC)
 - Drug Name
 - Therapeutic Class
- Note: drug spending is *claim amount* – not *net* (after rebates)
- Includes fee-for-service Medicaid claims and managed care encounters for drugs covered under the pharmacy benefit

Medicaid Drug Spending and Utilization

- Top 25 NDCs by Spending
- Top 25 Drugs by Spending
- Top 25 Therapeutic Classes by Spending
 - Within each class, lists top 3 NDCs
- Top 25 Therapeutic Classes by Spending
 - Within each class, lists top 3 drugs

**Annual Pharmaceutical Spending in the Maryland Medicaid Program (HealthChoice & Fee-for-Service Beneficiaries),
CY 2015 - CY 2020**

**Annual
Medicaid
Pharmacy
Expenditures**

Calendar Year	# Scripts	Total Medicaid Expenditure
2015	15,018,729	\$1,248,932,425
2016	15,387,389	\$1,359,558,573
2017	15,953,127	\$1,417,406,794
2018	16,234,357	\$1,434,822,164
2019	16,507,134	\$1,503,332,637
2020	16,134,641	\$1,639,804,973

Data as of September 9, 2021.

Excludes physician-administered J-code drug scripts & expenditures.

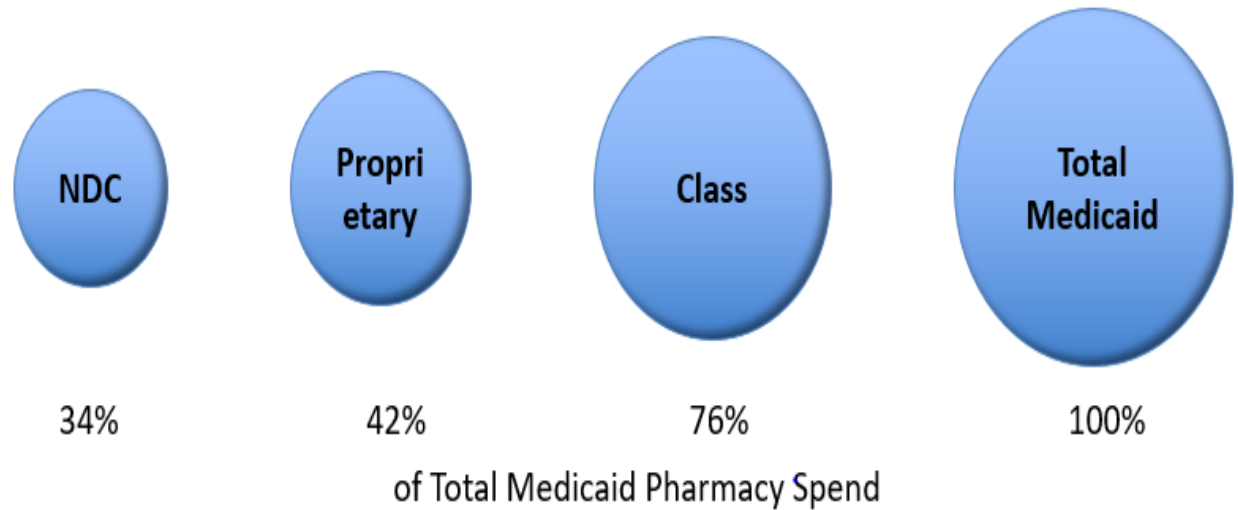
Illustrating the Top 25 by Cost

- NDC
 - Each tablet size, manufacturer, package size counted separately
- Proprietary Name
 - Many products that are similar in pharmacology counted separately
- Class
 - Definitions of class arbitrary and vary in granularity
- Aggregated Class
 - By disease state with separate classes if products of concern

Granularity VS. Aggregation

- Do you care about how many ounces of cement you need for your driveway repair or just how many bags?
- Do you need to distinguish every drug used for asthma from every other drug used for asthma?
 - MAYBE
- We aggregated by disease state, but include examples of the high cost agents within the aggregate
- ***Aggregation considers a higher percentage of the total spend***

Granularity of Top 25 (2020)

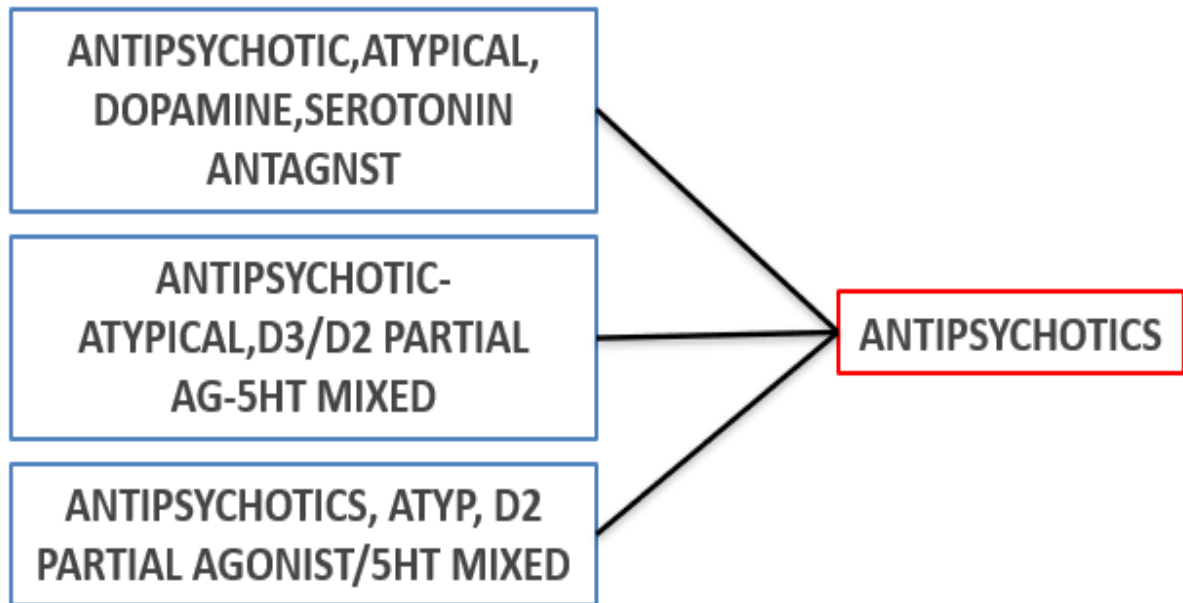


	NDC	Proprietary	Class	Total Medicaid
2020	\$527 Million	\$664 Million	\$1.19 Billion	\$1.57 Billion

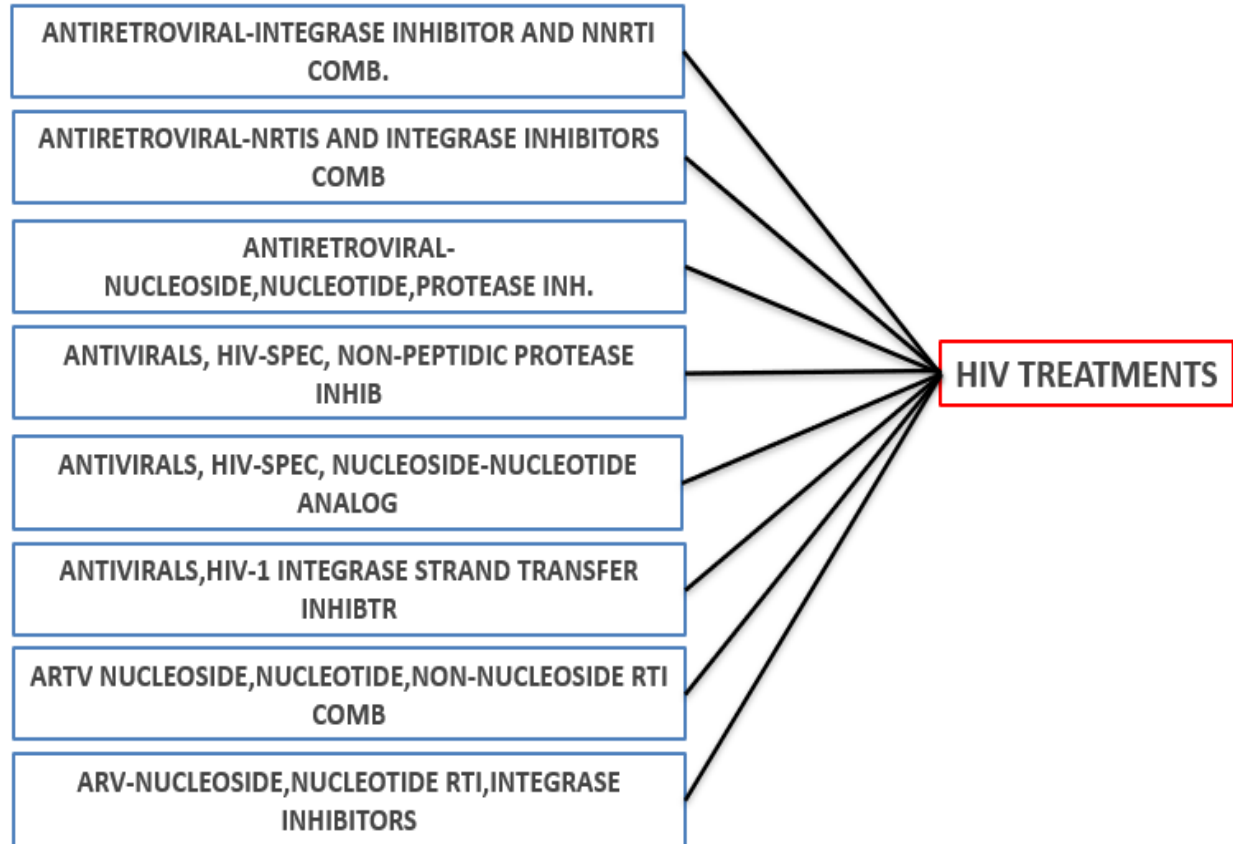
Aggregation

- We assigned *common* drug class names to very *specific* Medicaid drug classes

Sample Mapping #1



Sample Mapping #2



Proposed Classes (from Top 50)

ADHD STIMULANTS
**ALCOHOL USE DISORDER
TREATMENT**
ANAPHYLAXIS TREATMENT
ANTIBIOTICS
ANTICOAGULANTS
ANTICONVULSANTS
ANTIDEPRESSANTS
ANTI-DIABETIC NON-INSULINS
ANTIMIGRAINE AGENTS
ANTINEOPLASTICS
ANTIPSYCHOTICS
ANTIVIRALS
BIOLOGIC ANTI-INFLAMMATORIES
CYSTIC FIBROSIS AGENTS
DIABETES DIAGNOSTICS

GROWTH HORMONES
HEMOPHILIA TREATMENT AGENTS
HEPATITIS C VIRUS TREATMENTS
HIV TREATMENTS
INSULINS
MULTIPLE SCLEROSIS AGENTS
OPIOID ANALGESICS
OPIOID DISORDER TREATMENTS
PANCREATIC ENZYMES
POISONING ANTIDOTE
PREGNANCY MAINTENANCE
PROTON-PUMP INHIBITORS
RESPIRATORY NON-CF
SMOKING DETERRENTS
TOPICAL STEROIDS

Top NDCs: 2019

Table 1. Top 25 NDCs by Spending, 2019

NDC	Drug Name	Therapeutic Class	Count of Claims	Count of Users	Total Paid
61958250101	Biktarvy 50-200-25 MG TABLET	HIV TREATMENTS	19,375	3,138	\$ 55,511,558
12496120803	Suboxone 8 MG-2 MG SL FILM	OPIOID DISORDER TREATMENTS	148,538	15,632	\$ 33,470,239
61958190101	Genvoya TABLET	HIV TREATMENTS	11,654	1,620	\$ 32,324,937
12496121203	Suboxone 12 MG-3 MG SL FILM	OPIOID DISORDER TREATMENTS	74,128	8,035	\$ 32,190,866
49702023113	Triumeq 600-50-300 MG TABLET	HIV TREATMENTS	11,099	1,464	\$ 29,897,832

Top NDCs: 2020

Table 1. Top 25 NDCs by Spending, 2020

NDC	Drug Name	Therapeutic Class	Count of Claims	Count of Users	Total Paid
61958250101	Biktarvy 50-200-25 MG TABLET	HIV TREATMENTS	34,193	4,397	\$ 106,776,164
12496121203	Suboxone 12 MG-3 MG SL FILM	OPIOID DISORDER TREATMENTS	78,110	7,933	\$ 39,552,754
12496120803	Suboxone 8 MG-2 MG SL FILM	OPIOID DISORDER TREATMENTS	137,872	14,694	\$ 34,936,286
74055402	Humira(CF) PEN 40 MG/0.4 ML	BIOLOGIC ANTI-INFLAMMATORIES	4,918	723	\$ 34,934,634
74262528	Mavyret 100-40 MG TABLET	HEPATITIS C VIRUS TREATMENTS	2,478	1,253	\$ 32,162,985

Top Drugs: 2019

Table 2. Top 25 Drugs by Spending, 2019

Proprietary Name	Count of Claims	Count of Users	Total Paid
Suboxone	247,805	19,036	\$ 69,456,980
Biktarvy	19,375	3,138	\$ 55,511,558
Humira	8,215	1,182	\$ 53,489,251
Genvoya	11,654	1,620	\$ 32,324,937
Vyvanse	107,202	17,664	\$ 31,972,682

Top Drugs: 2020

Table 2. Top 25 Drugs by Spending, 2020

Proprietary Name	Count of Claims	Count of Users	Total Paid
Biktarvy	34,193	4,397	\$ 106,776,164
Suboxone	253,289	19,318	\$ 83,410,708
Humira	9,064	1,224	\$ 64,297,031
Vyvanse	104,263	16,630	\$ 32,805,827
Mavyret	2,478	1,253	\$ 32,162,985

Top Therapeutic Classes, by NDC: 2019

Table 3. Top 25 Therapeutic Class by NDC and Spending, 2019

Rank	Therapeutic Class	Count of Claims	Count of Users	Total Paid	Percentage of Class
1	HIV TREATMENTS	88,621	10,140	\$ 207,096,924	
	<i>Biktarvy 50-200-25 Mg Tablet</i>	19,375	3,138	\$ 55,511,558	26.8
	<i>Genvoya Tablet</i>	11,654	1,620	\$ 32,324,937	15.6
	<i>Triumeq 600-50-300 Mg Tablet</i>	11,099	1,464	\$ 29,897,832	14.4
2	BIOLOGIC ANTI-INFLAMMATORIES	14,317	2,160	\$ 94,359,602	
	<i>Humira Pen 40 Mg/0.8 Ml</i>	3,960	598	\$ 23,943,553	25.4
	<i>Humira(Cf) Pen 40 Mg/0.4 Ml</i>	2,831	520	\$ 18,451,702	19.6
	<i>Stelara 90 Mg/Ml Syringe</i>	554	129	\$ 12,016,170	12.7
3	ADHD STIMULANTS	466,703	58,541	\$ 92,887,977	
	<i>Vyvanse 30 Mg Capsule</i>	25,279	6,830	\$ 7,616,393	8.2
	<i>Adderall Xr 20 Mg Capsule</i>	26,581	5,528	\$ 6,904,335	7.4
	<i>Adderall Xr 30 Mg Capsule</i>	26,700	4,184	\$ 6,790,140	7.3
4	RESPIRATORY NON-CF	802,392	188,669	\$ 92,685,518	
	<i>Flovent Hfa 110 Mcg Inhaler</i>	32,962	10,510	\$ 8,459,907	9.1
	<i>Symbicort 160-4.5 Mcg Inhaler</i>	17,903	4,307	\$ 6,425,235	6.9
	<i>Albuterol Hfa 90 Mcg Inhaler</i>	156,676	72,473	\$ 6,030,058	6.5
5	OPIOID DISORDER TREATMENTS	305,579	22,722	\$ 81,955,395	
	<i>Suboxone 8 Mg-2 Mg Sl Film</i>	148,538	15,632	\$ 33,470,239	40.8
	<i>Suboxone 12 Mg-3 Mg Sl Film</i>	74,128	8,035	\$ 32,190,866	39.3
	<i>Zubsolv 8.6-2.1 Mg Tablet Sl</i>	10,416	1,243	\$ 4,100,184	5.0

Top Therapeutic Classes, by NDC: 2020

Table 3. Top 25 Therapeutic Class by NDC and Spending, 2020

Rank	Therapeutic Class	Count of Claims	Count of Users	Total Paid	Percentage of Class
1	HIV TREATMENTS	95,698	9,965	\$ 255,734,627	
	<i>Biktarvy 50-200-25 Mg Tablet</i>	34,193	4,397	\$ 106,776,164	41.8
	<i>Genvoya Tablet</i>	10,318	1,213	\$ 31,819,221	12.4
	<i>Triumeq 600-50-300 Mg Tablet</i>	10,147	1,197	\$ 29,415,230	11.5
2	BIOLOGIC ANTI-INFLAMMATORIES	18,086	2,534	\$ 124,610,092	
	<i>Humira(Cf) Pen 40 Mg/0.4 Ml</i>	4,918	723	\$ 34,934,634	28.0
	<i>Stelara 90 Mg/MI Syringe</i>	812	170	\$ 18,180,676	14.6
	<i>Humira Pen 40 Mg/0.8 Ml</i>	2,682	381	\$ 17,132,179	13.7
3	OPIOID DISORDER TREATMENTS	309,284	22,856	\$ 98,230,945	
	<i>Suboxone 12 Mg-3 Mg Sl Film</i>	78,110	7,933	\$ 39,552,754	40.3
	<i>Suboxone 8 Mg-2 Mg Sl Film</i>	137,872	14,694	\$ 34,936,286	35.6
	<i>Zubsolv 8.6-2.1 Mg Tablet Sl</i>	9,535	1,192	\$ 4,125,145	4.2
4	RESPIRATORY NON-CF	774,092	161,889	\$ 89,908,102	
	<i>Flovent Hfa 110 Mcg Inhaler</i>	33,541	9,607	\$ 8,660,202	9.6
	<i>Albuterol Hfa 90 Mcg Inhaler</i>	199,332	74,748	\$ 7,960,316	8.9
	<i>Spiriva Respimat 2.5 Mcg Inh</i>	12,375	2,464	\$ 5,307,378	5.9
5	ANTIPSYCHOTICS	440,387	53,537	\$ 80,924,884	
	<i>Invega Sustenna 234 Mg/1.5 Ml</i>	3,234	517	\$ 8,714,586	10.8
	<i>Invega Sustenna 156 Mg/MI Syrg</i>	3,694	722	\$ 6,610,971	8.2
	<i>Latuda 40 Mg Tablet</i>	5,495	1,396	\$ 6,546,550	8.1

Top Therapeutic Classes, by Drug: 2019

Table 4. Top 25 Therapeutic Class by Drug and Spending, 2019

Rank	Therapeutic Class	Count of Claims	Count of Users	Total Paid	Percentage of Class
1	HIV TREATMENTS	88,621	14,273	\$ 207,096,924	
	<i>Biktarvy</i>	19,375	3,138	\$ 55,511,558	26.8
	<i>Genvoya</i>	11,654	1,620	\$ 32,324,937	15.6
	<i>Triumeq</i>	11,099	1,464	\$ 29,897,832	14.4
2	BIOLOGIC ANTI-INFLAMMATORIES	14,317	2,302	\$ 94,359,602	
	<i>Humira</i>	8,215	1,182	\$ 53,489,251	56.7
	<i>Stelara</i>	758	192	\$ 14,212,545	15.1
	<i>Enbrel</i>	1,998	321	\$ 10,719,288	11.4
3	ADHD STIMULANTS	466,703	86,828	\$ 92,887,977	
	<i>Vyvanse</i>	107,202	17,664	\$ 31,972,682	34.4
	<i>Adderall</i>	89,571	14,441	\$ 22,129,727	23.8
	<i>Focalin</i>	41,168	6,335	\$ 15,264,776	16.4
4	RESPIRATORY NON-CF	802,392	310,447	\$ 92,685,518	
	<i>Flovent</i>	72,258	23,031	\$ 17,603,323	19.0
	<i>Albuterol Sulfate</i>	384,128	150,392	\$ 11,500,013	12.4
	<i>Symbicort</i>	24,192	5,910	\$ 8,341,068	9.0
5	OPIOID DISORDER TREATMENTS	305,579	28,415	\$ 81,955,395	
	<i>Suboxone</i>	247,805	19,036	\$ 69,456,980	84.7
	<i>Zubsolv</i>	33,307	3,877	\$ 9,535,336	11.6
	<i>Sublocade</i>	969	325	\$ 1,539,596	1.9

Top Therapeutic Classes, by Drug: 2020

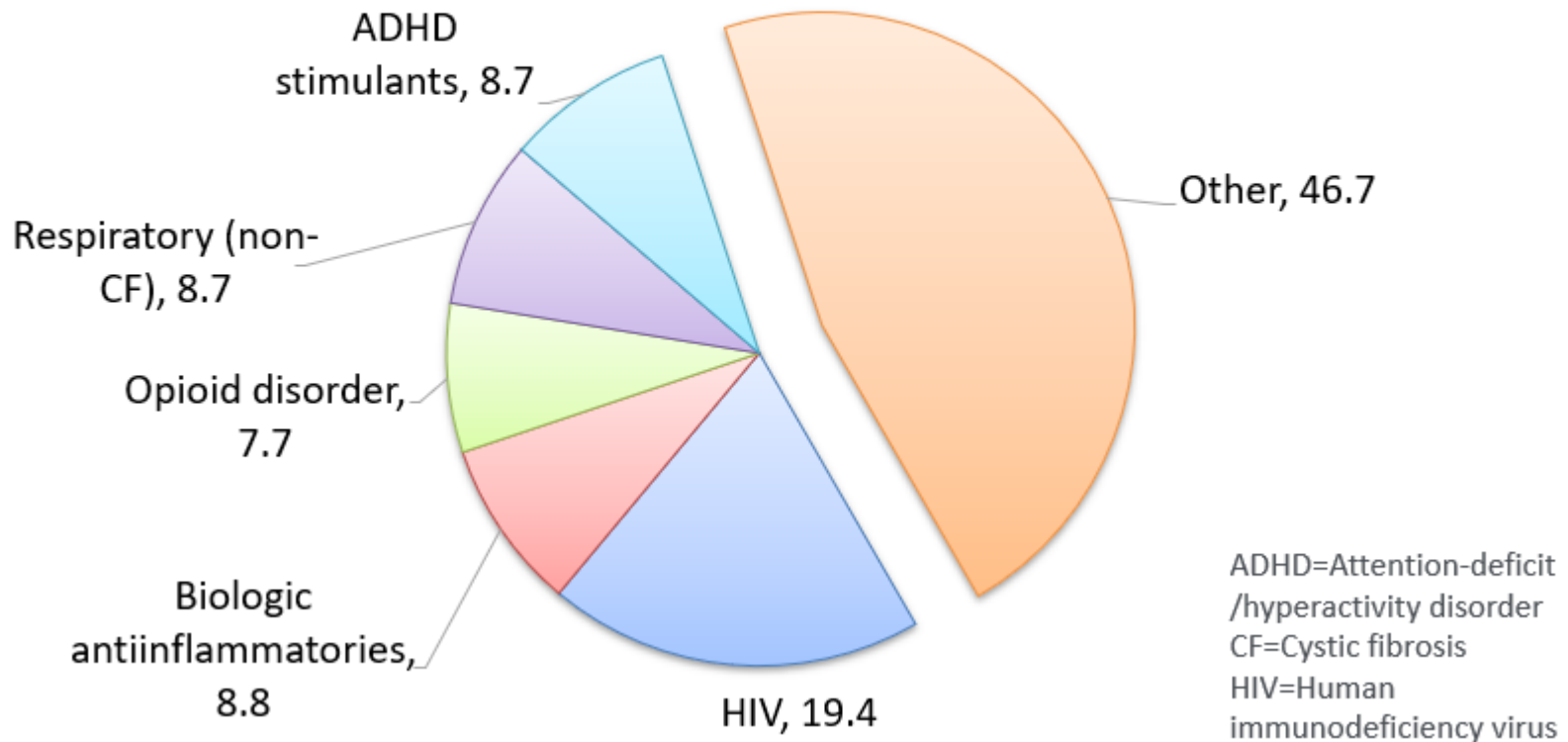
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2	BIOLOGIC ANTI-INFLAMMATORIES	18,086	2,694	\$ 124,610,092	
	<i>Humira</i>	9,064	1,224	\$ 64,297,031	51.6
	<i>Stelara</i>	1,020	233	\$ 20,494,194	16.4
	<i>Enbrel</i>	2,078	320	\$ 11,482,272	9.2
3	OPIOID DISORDER TREATMENTS	309,284	27,847	\$ 98,230,945	
	<i>Suboxone</i>	253,289	19,318	\$ 83,410,708	84.9
	<i>Zubsolv</i>	29,143	3,277	\$ 9,327,067	9.5
	<i>Sublocade</i>	2,579	754	\$ 4,302,102	4.4
4	RESPIRATORY NON-CF	774,092	238,429	\$ 89,908,102	
	<i>Flovent</i>	72,309	20,468	\$ 17,884,656	19.9
	<i>Albuterol Sulfate</i>	445,699	143,964	\$ 14,401,164	16.0
	<i>Spiriva Respimat</i>	16,102	3,169	\$ 6,928,365	7.7
5	ANTIPSYCHOTICS	440,387	73,079	\$ 80,924,884	
	<i>Latuda</i>	19,024	2,989	\$ 23,920,282	29.6
	<i>Invega Sustenna</i>	8,636	1,256	\$ 17,512,540	21.6
	<i>Abilify Maintena</i>	4,560	701	\$ 9,354,727	11.6

Top 25 Drug Classes

5 of the 25 drug classes account for over 50% of spend in 2019 & 2020.

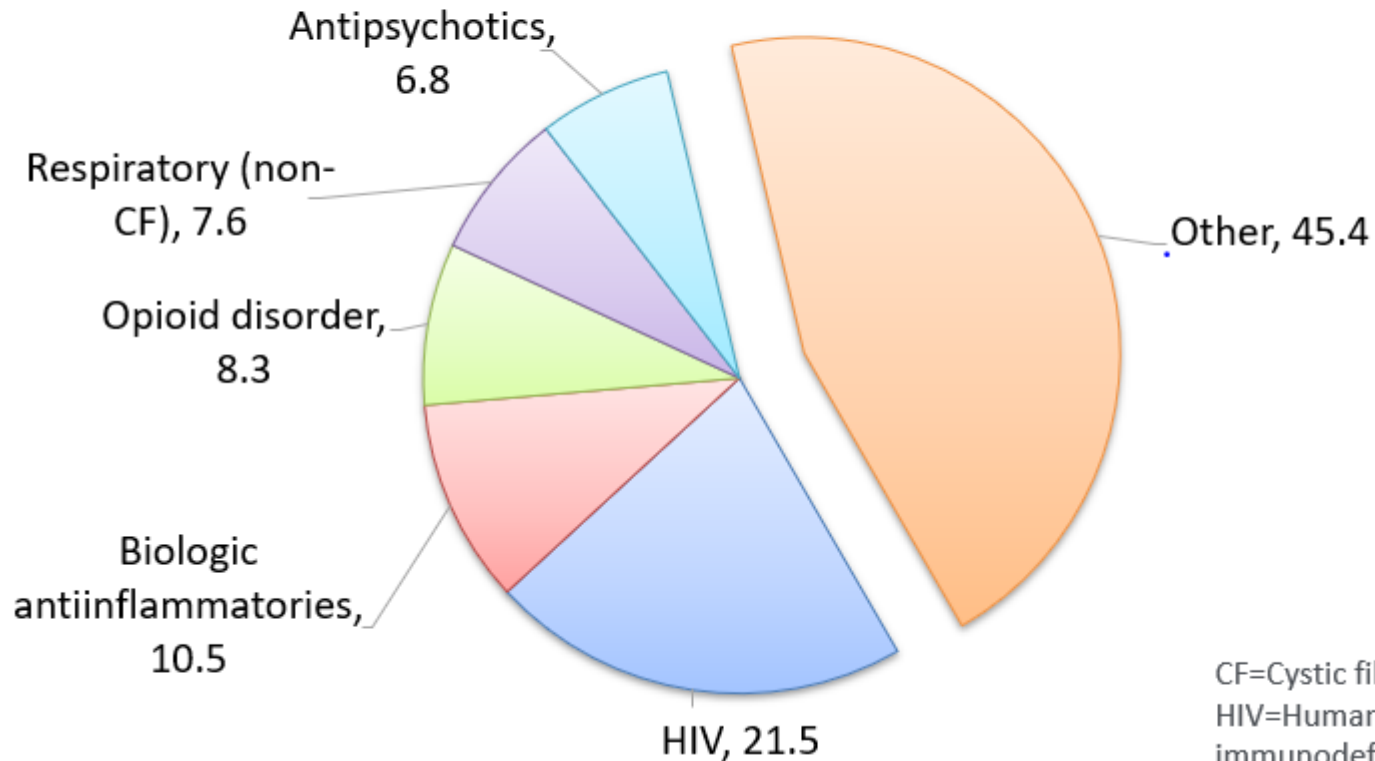
2019: % of Top 25



Top 25 Drug Classes

5 of the 25 drug classes account for over 50% of spend in 2019 & 2020.

2020: % of Top 25



CF=Cystic fibrosis
HIV=Human immunodeficiency virus

Changes in Top 25 Classes

	Only in 2019	Only in 2020
GENE THERAPY AGENTS	X	
ANTIMIGRAINE AGENTS	X	
POISONING ANTIDOTE		X
ANAPHYLAXIS TREATMENT		X

Considerations

- Top 25 drug classes cover over 70% of the annual pharmacy spend
- High volume vs. high drug cost classes
 - High volume: common chronic conditions (e.g., diabetes, asthma/chronic obstructive pulmonary disease)
 - High drug cost: specialty medications (e.g., biologics, cystic fibrosis agents), new therapeutic entities especially w/ little market competition (e.g., gene therapies)

Limitations

- Net price unavailable
- Analysis restricted to pharmacy claims

Future Medicaid Analysis

- Trends
- Additional Board priorities

Questions?

